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THE LIFE AND LETTERS OF JOHN MUIR

IN TWO VOLUMES

VOLUME I

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BY

WILLIAM FREDERIC BADÈ

VOLUME I

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PREFACE

TWENTY years after the first companies of forty-niners arrived in California, a unique type of Argonaut landed in San Francisco, crossed the Coast Range and the San Joaquin plain, and, passing through the gold-diggings, went up the Merced until he reached Yosemite Valley. Not the gold of California's placers and mines, but the plant gold and beauty of her still unwasted mountains and plains, were the lure that drew and held John Muir. Forty-six years later, in the closing days of fateful 1914, this widely traveled explorer and observer of the world we dwell in faced the greatest of all adventures, dying as bravely and cheerfully as he had lived.

Not only from his large circle of devoted personal friends, but from among the thousands who had been thrilled by his eloquent pen, arose insistent demands for a fuller presentation of the facts of his life than is available in his incomplete autobiography, "The Story of My Boyhood and Youth," and in his other published works. When the present writer, at the request of Mr. Muir's daughters, undertook to

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edit some of his unpublished journals and to prepare his life and letters, he had no adequate conception of the size and complexity of the task. The amount of the manuscript material to be examined made it vastly more time-consuming than was at first anticipated.

Throughout his life John Muir carried on a prolific and wide-ranging correspondence. His own letters were written by hand, and, with the exception of an occasional preliminary draft, he rarely kept copies. In calendaring the many thousands of letters received from his friends, a systematic effort was made to secure from them and their descendants the originals or copies of Muir's letters for the purposes of this work. The success of this effort was in part thwarted, in part impeded, by the Great War. To the many who responded, the writer expresses his grateful acknowledgments. The Carr series, with some exceptions like the Sequoia letter, was obtained from Mr. George Wharton James, to whose keeping the correspondence had been committed by Mrs. Carr. The preponderance of letters addressed to women correspondents is partly explained by the fact that Muir's men friends did not preserve his letters as generally as the women. It should be added, also, that several valuable series were lost in the San Francisco earthquake and fire of 1906.

PREFACE

At the time of his death Muir had in preparation a second volume of his autobiography. Though very incomplete, it was found so important that it seemed best to incorporate it in the present work, whose form of presentation and selection of materials had to be accommodated somewhat to make this possible. It is chiefly in the letters, however, that the reader will find revealed the charm of Muir's personality and the spontaneity of his nature enthusiasms.

In conclusion, the writer desires to acknowledge special obligations to William E. Colby for frequent suggestions and assistance in verifying facts, to Elizabeth Gray Potter for working out a valuable and convenient system of arrangement and indexing for the collection of Muiriana, and to his wife, Elizabeth LeBreton Badè, for much practical help and advice.

WILLIAM FREDERIC BADÈ

BERKELEY, CALIFORNIA
September 23, 1923

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THE LIFE AND LETTERS OF JOHN MUIR

VOLUME I

THE LIFE AND LETTERS OF JOHN MUIR

CHAPTER I

THE ANCESTRAL BACKGROUND

DELVING one day among miscellaneous papers that had been brought to me from the silent and deserted home of John Muir in the Alhambra Valley, near Martinez, California, I found a sketch of his life which led me to hope that a difficult part of my biographical task had been made easy. Just then my eye caught the laconic comment, "A strange, bold mixture of Muirs!" penciled across the manuscript in his own familiar flowing hand. Apparently the sketch had been sent to Muir by the admiring author, who, finding himself in need of an ancestry worthy of his subject, had made short shrift of facts to get one. Taking a survey of Muirs available in biographical reference works, he selected as father for John Muir a distinguished Scotch Sanscritist of the same name, gave him as an uncle an equally eminent Scotch Arabist, and for good measure added,

as a younger brother, a well-known Scotch chemist. Given the conviction that genius must spring from genius, the would-be biographer had done his best to provide his hero with an adequate pedigree.

But while John Muir's origin was humbler than this invention, the mixture of elements need abate nothing either in strangeness or in boldness. Although unfortunately it is not possible to trace back far the tangled thread of his descent, one feels instinctively that marked ancestral traits and faculties must have gone into the making of a personality so unusual and so fascinating. His name he appears to have taken from his paternal grandfather, a Scotchman by the name of John Muir. Beyond the latter our knowledge of this line of Muirs ceases, and it may be doubted whether a search of Scotch parish records, even, would reveal more than another bare name.

Of this ancestral John Muir we know only that he was a soldier by profession; that he married an English woman by the name of Sarah Higgs; that she bore him two children—Mary and Daniel; that his wife died when the second child was only nine months old; and that he followed her to the grave three months later. The orphaning of Mary and Daniel Muir at so tender an age may account for the

fact that the American family tradition of the Muirs has little to report about John Muir, the soldier, and his wife Sarah Higgs Muir, except the tragedy of their untimely deaths. All knowledge of their birthplaces and parentage, tastes, accomplishments, and dispositions is lost in oblivion.

Our detailed knowledge of the family really begins with Daniel Muir, the younger of the two orphans and the only male link in the Muir pedigree at this point. He it was who in due time became the father of John Muir, the naturalist, and to the latter's brief sketch of his father's life, written as an obituary notice, we owe practically all our extant information about the early life of Daniel Muir. The latter was born in Manchester, England, in 1804. His sister Mary Muir was his senior by about eleven years, and when their parents had died she "became a mother to him and brought him up on a farm that belonged to a relative in Lanarkshire, Scotland." From an aged daughter of Mary Muir, Grace Blakeley Brown, the writer ascertained the fact that the above-mentioned farm was situated at Crawfordjohn, about thirty-five miles southeast of Glasgow. If it is true, as alleged, that it was one of his mother's people to whom the farm belonged, we are probably not far wrong in

supposing that John Muir, the elder, also came from this region, and met Sarah Higgs in Crawfordjohn.

How much importance one may attach to ante-natal influences exerted upon one's forbears by the physical characteristics of a country is a debatable question. "Some of my grandfathers," John Muir once wrote in playful mood to a friend, "must have been born on a muirland, for there is heather in me, and tinctures of bog juices, that send me to Cassiope, and, oozing through all my veins, impel me unhaltingly through endless glacier meadows, seemingly the deeper and danker the better." Did he have in mind some family tradition of a Scotch Highland ancestry? We do not know; but if any of his ancestors came from the country of Lanark there is aptness in the hyperbole. The parish of Crawford consists chiefly of mountains and moors. Coulter Fell, Tinto, Green Louther, Five Cairn Louther, and other summits in the immediate vicinity of Crawfordjohn rise grandly out of the high moorlands that constitute most of the area in the eastern and southern parts of the county. Hard by the village flows Duneaton Water, one of the numerous rushing, songful streams that feed the River Clyde. The highest inhabited land in Scotland is said to lie at Leadhills,

on the banks of Glengonner Water, not many miles south of Crawfordjohn.

In any case, it was amid these surroundings, according to John Muir's sketch, that his father "lived the life of a farm servant, growing up a remarkably bright, handsome boy, delighting in athletic games and eager to excel in everything. He was notably fond of music, had a fine voice, and usually took a leading part in the merry song-singing gatherings of the neighborhood. Having no money to buy a violin, when he was anxious to learn to play that instrument, he made one with his own hands, and ran ten miles to a neighboring village through mud and rain after dark to get strings for it."

In the course of time his sister Mary married a shepherd-farmer of Crawfordjohn by the name of Hamilton Blakley, whereupon her new home became also that of Daniel Muir. A Scottish peasant's life in a country village, remote from populous centers, must have afforded only narrow opportunities for education and self-improvement. John Muir was accustomed to ascribe the rigidity of his father's prejudices and convictions to the deficient quality of his early education. But it must be admitted that the making of a violin by a boy, who had grown up amid the handicaps of such

surroundings, indicates the possession on his part of uncommon native resources of skill and ingenuity. An achievement of this kind suggests the probability that there were other products of his manual craftsmanship, and the remarkable inventive power and "whittling" skill which his son John developed as a young man doubtless were not unconnected with his father's example and ability.

"While yet more boy than man," continues the sketch, "he suddenly left home to seek his fortune with only a few shillings in his pocket, but with his head full of romantic schemes for the benefit of his sister and all the world besides. Going to Glasgow and drifting about the great city, friendless and unknown, he was induced to enter the British army, but remained in it only a few years, when he purchased his discharge before he had been engaged in any active service. On leaving the army he married and began business as a merchant in Dunbar, Scotland. Here he remained and prospered for twenty years, establishing an excellent reputation for fair dealing and enterprise. Here, too, his eight children were born, excepting the youngest who was born in Wisconsin." It is strong evidence of his energy and love of adventure that he closed out his business in Dunbar in 1849 and "emi-

grated to the wilds of America" at the mature age of forty-five years. His original intention was to go to the backwoods of Upper Canada, but he was diverted from this purpose by fellow emigrants who told him that the woods of Canada were so dense and heavy that an excessive amount of labor was required to clear land for agriculture. From Milwaukee he made his way by wagon into the central part of southern Wisconsin, where he bought, cleared, and brought under cultivation, successively, two large farms. They were situated about ten miles from Kingston and were known respectively as the Fountain Lake and the Hickory Hill farms.

When the second one also was thoroughly subdued and under cultivation, and his three sons had gone to seek their fortunes elsewhere, he sold it and devoted himself solely to religious work. As an evangelist he went from place to place in Wisconsin, Canada, and Arkansas, distributing books and tracts at his own cost, and preaching the gospel in season and out of season with a firm sustained zeal.

Nor was this period of religious activity restricted to those later years, for throughout almost his whole life as a soldier, merchant, and farmer, as well as evangelist, he was an enthusiastic believer and upholder of the gospel, and it is this burning belief that forms the groundwork of his character and explains its apparent contradictions. He be-

longed to almost every Protestant denomination in turn, going from one to another, not in search of a better creed, for he was never particular as to the niceties of creeds, but ever in search of a warmer and more active zeal among its members with whom he could contribute his time and money to the spread of the gospel.

Though suffering always under the disadvantage of an imperfect education, he never failed in any important undertaking and never seemed to feel himself overtasked, but by sheer force of will and continuous effort overcame all difficulties that stood in his way. He was successful in business and bestowed much of his earnings on churches and charities.

His life was singularly clean and pure. He never had a single vice excepting, perhaps, the vices of over-industry and over-giving. Good Scripture measure, heaped up, shaken together, and running over, he meted out to all. He loved little children, and beneath a stern face, rigid with principle, he carried a warm and tender heart. He seemed to care not at all what people would think of him. That never was taken into consideration when work was being planned. The Bible was his guide and companion and almost the only book he ever cared to read.

His last years, as he lay broken in body, waiting for rest, were full of calm divine light. Faith in God and charity to all became the end of all his teachings, and he oftentimes spoke of the mistakes he had made in his relation toward his family and neighbors, urging those about him to be on their guard and see to it that love alone was made the guide and rule of every action.... His youthful

enthusiasm burned on to the end, his mind glowing like a fire beneath all its burden of age and pain, until at length he passed on into the land of light, dying like a summer day in deep peace, surrounded by his children.

On his mother's side John Muir was descended from the old Scottish stock of the Gilderoys whose deeds won a place in the Border lore of Scotland. There is, for instance, the fine old ballad "Gilderoy," but the possibility that its thirteen stanzas may celebrate a member of this branch of the family must remain as remote as it is romantic. In a manuscript copy of the ballad, made for John Muir years ago by a Scotch relative of the Gilroy line, the opening stanzas run as follows:

"Gilderoy was a bonnie boy,
Had roses till his shoon;
His stockings were of silken soy,
Wi' garters hanging doon;
It was, I ween, a comely sight,
To see sae trim a boy;
He was my joy and heart's delight,
My winsome Gilderoy.

"Oh! sic twa charming een he had,
A breath as sweet as rose;
He never ware a Highland plaid,
But costly silken clothes.
He gained the love of ladies gay,
Nane e'er to him was coy.
Ah! wae is me! I mourn this day,
For my dear Gilderoy!" etc.

In Thomson's "Orpheus Caledonius" (1733) the hero of the poem is represented as contemporary with Mary, Queen of Scots. But a later authority, describing this Gilderoy as "the Robin Hood of Scottish minstrelsy," identified him with the leader of a band of freebooters that three centuries ago roamed over the Highlands of Perthshire until both he and his band fell victims to the Stewarts of Athol in 1638.

According to a Muir family tradition John's maternal great-grandfather, James Gilderoy, had three sons who took respectively the names Gilderoy, Gilroy, and Gilrye. Inquiry of descendants in Scotland has failed to bring to light the first of these. But a James Gilderoy[1] was resident at Wark in Northumberland, on the Border, in 1765. He is known to have had at least two sons — John and David. The former, born in 1765, took the Gilroy form of the family name and was alternately a professional gardener and a "land agent." David, who was born July 15, 1767, is the "grandfather Gilrye" of Muir's "My Boyhood and Youth." Both boys appear to have gradually moved northward along the border, and an old Scotch family Bible, in the possession of a granddaughter of John Gilroy, invests with

[1] Also spelled "Gildroy" and "Gilroy" in contemporary documents.

the importance of an event the arrival of David Gilrye at Dunbar, Scotland, on December 20, 1794.

David was no longer in the first flush of youth when he settled in Dunbar. He was twenty-seven years old, and in his years of wandering, if we knew something about them, we probably should find no lack of hardship and adventure. Love of gardens and of landscapes, not improbably, gave direction sometimes to his footsteps, for John Muir more than a century later told how his earliest recollections of the country were gained on short walks in company with Grandfather Gilrye, who also loved to take him to Lord Louderdale's gardens. There is something pleasingly suggestive in the picture of seventy-five-year-old David Gilrye leading his three-year-old grandson into the paths that were to bring fame to the one, and rescue from oblivion to the other.

Perhaps it was Margaret Hay who confided to her Bible the date of David's arrival at Dunbar. She had good reason to remember the event, for six months later he led her to the altar and made her his wife. Through Grandmother Gilrye, John Muir thus shared the good Scotch blood of the Hays, a numerous clan, that has produced men and women of distinction both in Europe and in America. A

relative of Margaret Hay is said to have suffered martyrdom in the days when the Covenanters were hunted down for their sturdy opposition to "popery and prelacy."

A numerous offspring came to enliven the household of David and Margaret Hay Gilrye — three sons and seven daughters. But death, also, was a tragically persistent visitor. All the sons and three of the daughters died between the ages of seventeen and twenty-six — a fearful toll of life exacted by the white plague. Since two other daughters had died at a tenderer age, only Margaret, the eldest, and Ann, the seventh of the Gilrye sisters, lived to survive their parents and round out a good old age. The tragedy of such a series of untimely deaths is likely to have had an intensifying influence upon the religious sensibilities of the family. In 1874, when her sister Margaret died at the ripe age of seventy-eight, Ann Gilrye, then the wife of Daniel Muir, described herself as "the last remnant of a numerous family." "My mother," she wrote to her son John, "was just seventy-eight years old when she died, and my father eighty-eight. My parents have mouldered in the dust over twenty years, but Christ is the resurrection and the life, and if we believe in him our souls will never die."

Daniel Muir, coming to Dunbar as a recruiting sergeant, met there his first wife by whom he had one child. She was a woman of some means and enabled him to purchase his release from the army in order to engage in the conduct of a business which she had inherited. Their happiness together was of brief duration, for both she and the child were snatched away by a premature death, leaving him alone.

It seems to have been early in 1833 that Daniel, now a widower with a prospering business, became a familiar caller in the Gilrye family — now also sadly depleted in number. Margaret had been married thirteen years earlier to James Rae and had established her own home. It was Aunt Rae's precious lily garden that later excited the childish admiration of little Johnny Muir and made him wonder whether, when he grew up, he "should ever be rich enough to own anything like so grand." Twenty-year-old Ann and her sixteen-year-old brother David were the only ones left under the parental roof. All the rest were lying side by side in the Dunbar churchyard, whither also the last male scion of the family was to be carried the following year.

On the 28th of November, 1833, Ann Gilrye became the wife of Daniel Muir, and moved across the street into the old house which John

Muir has described in his boyhood recollections. A lively brood of children soon came to make their home there. Margaret, Sarah, John, David, Daniel, Mary, and Anna were born there in the given order, Joanna being the only one who was born in Wisconsin. John Muir, third in succession and the eldest boy, was born on the 21st of April, 1838.

The bond of affectionate intimacy which always existed between him and his mother would make a characterization of her from his pen of more than ordinary interest. But we have to content ourselves with one sentence from a fragmentary autobiographical sketch. "She was a representative Scotch woman," he wrote, "quiet, conservative, of pious, affectionate character, fond of painting and poetry." To this we may add the interesting information, contained in one of his letters, that his mother wrote poetry in her girlhood days.

It is quite apparent from her letters that she shared with him that æsthetic appreciation of nature which is so characteristic an element in his writings. While most of her letters concern home affairs and are full of maternal solicitude for his health and comfort, they are seldom without that additional touch which reveals kinship of soul as well as of blood. Referring to descriptions in one of his early California

letters, she writes, "Your enjoyment of the beauties of California is shared by me, as I take much pleasure in reading your accounts."

Underneath the maternal solicitude for his health and safety one may also detect at times the Scotch Covenanter's concern for his spiritual welfare. "Dear John," she writes in 1870, "I hope your health is good — so that you will be able really to enjoy and admire all the vast magnificence with which you are daily surrounded. I know it is far beyond any conception of mine, but we can unite in praising and serving our Heavenly Father who is the maker and supporter of this wonderful world on which we live for a time. But time is short, and we must live forever. I trust we have a good hope, through grace, of spending eternity in mansions of glory everlasting."

The glacial studies with which her son began to busy himself during the seventies must have tried at times her Covenanter faith in so far as it involved a conception of the age and origin of the world different from that which she had learned in her youth. But she continues to write cheerfully about summers and autumns that make rambles in the woods a deepening joy. "The trees and flowers and plants looked more beautiful to me than ever before. . . . I presume you are quite busy with your studies,

writing your book. I feel much interested in all that interests you, although in many of your studies you leave me far behind. Yet I rejoice in all your joy, and hopes of future advancement. . . . You were much talked about and thought about at our last Christmas gathering. Many were the kind wishes and loving thoughts wafted to the valley of Yosemite." Almost to the last year of her life she was accustomed to go to the woods in April in order to gather and send to him with her birthday wishes a few of his favorite Wisconsin spring flowers. These little acts reveal, even more than anything she said, the poetic strain in her blood which kept fresh for her and her eldest boy, until he was nearly sixty and she over eighty, the vernal blossoms they had picked together long ago.

Very different was the attitude which Daniel Muir assumed toward the interests and enthusiasms of his son. Being an extreme literalist as far as the Bible was concerned, he could not look without suspicion upon his scientific studies, because they went "beyond what was written." Whenever he saw an issue arising between his traditional interpretation of the world's origin according to Genesis on the one side, and the facts of geology and glaciation on the other, he was accustomed to say, "Let God be true and every man a liar." John's

passion for exploration, and the adventures incidental thereto, he regarded as little less than sinful. That there were different levels of development within the Bible, involving the displacement of earlier and cruder ideas of God and the world by higher and more intelligent ones, never entered his mind. Nor did it ever occur to him, apparently, that the facts of nature are likewise a part of the manuscripts of God, and that he who endeavors to read them accurately may be rendering his fellow men a religious as well as an intellectual service. He sincerely believed that his son was cheating the Almighty in devoting his time to such interests and enjoyments. "You are God's property," he wrote to him once. "You are God's property, soul and body and substance — give those powers up to their owner!" Even the most painstaking naturalist, he maintained, could not discover anything of value in the natural world that the believer did not see at one glance of the eye. These views went hand in hand with a naïve credulity that accepted unquestioningly the pious marvels related in the tracts which he was distributing, and of which he kept sending selected ones, with comments, to his son John.

Perhaps the reader will receive a clearer and truer impression of the differing attitudes of

his father and mother toward his nature studies if we offer at this point a typical letter of Daniel Muir in which the underscored words are indicated by italics. A note on the envelope, in John's handwriting, says "written after reading the account of my storm night on Shasta."

PORTAGE CITY, *March 19th*, 1874

MY VERY DEAR JOHN:

Were you as really *happy* as my *wish* would make you, you would be permanently so in the *best* sense of the word. I received yours of the third inst. with your slip of paper, but I had read the same thing in "The Wisconsin," some days before I got yours, and then I *wished* I had not seen it, because it harried up my feelings so with another of your hair-breadth escapes. Had I seen it to be *God's work* you were doing I would have felt the *other* way, but I knew it was not God's work, although you seem to think you are doing God's service. If it had not been for God's boundless mercy you would have been cut off in the midst of your folly. All that you are attempting to show the *Holy Spirit* of God gives the believer to *see* at one glance of the eye, for according to the tract I send you they can see God's love, power, and glory in everything, and it has the effect of

turning away their sight and eyes from the things that are seen and temporal to the things that are not seen and eternal, *according to God's holy word.* It is of no use to look through a glass darkly when we have the *Gospel* and its *fulfillment,* and when the true practical believer has got the Godhead in fellowship with himself all the time, and reigning in his heart all the time. I know that the world and the church of the world will glory in such as you, but how can they believe which receive honor one of another and seek not the honor that cometh from God only John 5, 44. You cannot warm the heart of the saint of God with your cold icy-topped mountains. O, my dear son, come away from them to the spirit of God and His holy word, and He will show our lovely Jesus unto you, who is by His finished work presented to you, without money and price. It will kindle a flame of sacred fire in your heart that will never go out, and then you will go and willingly expend it upon other icy hearts and you will thus be blessed infinitely in tribulation and eternally through Jesus Christ, who is made unto us of God wisdom, righteousness, sanctification, and redemption. I Cor. 1, 30, 31. And the best and soonest way of getting quit of the writing and publishing your book is to burn it, and then it will do no more harm

either to you or others. And then, like Paul, look to the cross of Christ and glory in it, and as in the sight of God and in Jesus Christ, my only Lord and Master, I hereby say Amen to it.

I expect, my God willing, to leave Portage City for Hamilton, Toronto, on the last day of this month. I bought a house last October there and without my family, at present, I mean to go in the way of God's providence to spend all my time in His service and wholly by His grace to glorify Him. I shall be glad to hear from you there any time. I will get your letters at the post-office there.

We are all well. Your dear mother sends her love to you.

Your affectionate father in Christ

DANIEL MUIR

The meaning of the last paragraph of the letter will be found in some, to John, disquieting news contained in a letter of Mrs. Daniel Muir, Sr., under date of February 26, 1872. "We were surprised," she writes, "to hear your father say that he has decided to sell the [Hickory Hill] farm, and everything he has on it, by auction. So he is at present engaged in putting up bills of sale, the sale to take place on Tuesday, the 5th of March. He says he will

not decide on where he will go until the sale is over." The purpose he had in view in coming to this sudden decision is revealed in one of John's letters to his brother David. Daniel Muir's religious fanaticism had in John's view reached a point where it was necessary to ask his brother and his brother-in-law to interfere in the interest of their sisters and their mother.

To David Gilrye Muir

YOSEMITE VALLEY
March 1st, 1873

DEAR DAVE:

I answer your letter at once because I want to urge you to do what you can in breaking up that wild caprice of father's of going to Bristol and Lord Muller. You and David Galloway are the only reliable common-sense heads in our tribe, and it is important, when the radical welfare of our parents and sisters is at stake, that we should do all that is in our power.

I expected a morbid and semi-fanatical outbreak of this kind as soon as I heard of his breaking free from the wholesome cares of the farm. Yet I hoped that he would find ballast in your town of some Sabbath-school or missionary kind that would save him from any violent crisis like the present. That thick-

matted sod of Bristol orphans, which is a sort of necessary evil induced by other evils, is all right enough for Muller in England, but all wrong for Muir in America.

The lives of Anna and Joanna, accustomed to the free wild Nature of our woods, if transplanted to artificial fields and dingy towns of England, would wilt and shrivel to mere husks, even if they were not to make their life work amid those pinched and blinking orphans.

Father, in his present feeble-minded condition, is sick and requires the most considerate treatment from all who have access to his thoughts, and his moral disease is by no means contemptible, for it is only those who are endowed with poetic and enthusiastic brains that are subject to it.

Most people who are born into the world remain babies all their lives, their development being arrested like sun-dried seeds. Father is a magnificent baby, who, instead of dozing contentedly like most of his neighbors, suffers growing pains that are ready to usher in the dawn of a higher life.

But to come to our work, can you not induce father to engage in some tract or mission or Sabbath-school enterprise that will satisfy his demands for bodily and spiritual exercise? Can you not find him some thicket of destitu-

tion worthy of his benevolence? Can you not convince him that the whole world is full of work for the kind and willing heart? Or, if you cannot urge him to undertake any independent charity, can you not place him in correspondence with some Milwaukee or Chicago society where he would find elbow room for all his importance. An *earnest* man like father, who also has a little money, is a valuable acquisition to many societies of a philanthropic kind, and I feel sure that if once fairly afloat from this shoal of indolence upon which he now chafes, he would sail calmly the years now remaining to him.

At all events, tell mother and the girls, that whether this side the sea or that, they need take no uneasiness concerning bread. . . .

JOHN MUIR

Their efforts were successful. A new home was established in Portage, Wisconsin, and from there Daniel Muir went alone on prolonged evangelistic trips to Canada and parts of the central West. Laid low by old age and a broken limb, he died in Kansas City, at the home of one of his daughters, in 1885. His last years were calm and peaceful as John had foreseen. Eleven years later his wife also followed him into the land of the leal.

Into this parental and ancestral background, sketched in its more significant outlines, was born at Dunbar, Scotland, April 21, 1838, the subject of this biography. Fleeting glimpses of his earliest childhood reveal Johnny Muir as a vivid, auburn-haired lad with an uncommonly keen and inquiring pair of blue eyes. His boyhood in Scotland extended over only the first eleven years of his life (1838–49), but the fifty and more pages which he devotes to memories of these years in his autobiography reveal the deep impression they made upon his mind. His school education began early — before he had completed his third year. But even before that time he had, like his fellow Scotchman Hugh Miller, learned his letters from shop signs across the street. In this as in other matters Grandfather Gilrye was his earliest teacher and guide.

Scotch pedagogical methods in those days were an uncompromising tyranny. So much is clear from Muir's feeling allusions to the inevitable thrashings, in school and at home, which promptly followed any failure to commit assigned lessons to memory. The learning of a certain number of Bible verses every day was a task which his father superimposed upon the school lessons, and exacted with military precision. "By the time I was eleven years old,"

wrote the victim of this method, "I had about three-fourths of the Old Testament and all of the New by heart and by sore flesh. I could recite the New Testament from the beginning of Matthew to the end of Revelation without a single stop." Records both written and oral testify to John's phenomenal feats of memory in reciting chapters from the Bible and the poetry of Robert Burns.

Whatever may be thought of the wisdom of this educational method, there can be no doubt that it resulted in forming the boy's literary taste and in giving him a rare training in the use of English undefiled. The dignity and rich quality of his diction, and his arrestingly effective employment of Biblical metaphors disclose the main sources of his literary power in familiarity with the King James Version, the only one available in his boyhood.

The severest kind of pedagogical weather was encountered when he left the old Davel Brae school for the grammar school. Old Mungo Siddons, who presided over the former, seems to have been a man possessed of human sympathies, for he managed to make himself gratefully remembered for the gooseberries and currants, at least, with which he sweetened the closing exercises when vacation days arrived. But Mr. Lyon, the master of the grammar

school, was a disciplinarian of the most inflexible kind. "Under him," Muir writes, "we had to get three lessons every day in Latin, three in French, and as many in English, besides spelling, history, arithmetic, and geography. Word lessons in particular, the wouldst-couldst-shouldst-have-loved kind, were kept up, with much warlike thrashing, until I had committed the whole of the French, Latin, and English grammars to memory, and in connection with reading-lessons we were called on to recite parts of them with the rules over and over again, as if all the regular and irregular incomprehensible verb stuff was poetry."

Some of the textbooks he used have survived the accidents of time and travel and furnish illuminating examples of the severe demands that were made upon children in the Dunbar grammar school. One of these is Willymott's "Selections from the Colloquies of Corderius," which he began to study when he was nine years old, and which would be a severe tax on the wits of most Freshmen of our day. It must have seemed little less than mockery to the pupils that the "Argumentum" of the very first "Colloquium" calls it an "*exemplum ad parvulos blande et comiter in schola tractandos, ne severitate disciplinæ absterreantur.*" "Kind and gentle treatment of

youngsters lest they be frightened away by severity of discipline" — that was no serious concern of schoolmaster Lyon. "Old-fashioned Scotch teachers," wrote Muir in describing his school days, "spent no time in seeking short roads to knowledge, or in trying any of the new-fangled psychological methods so much in vogue nowadays. There was nothing said about making the seats easy or the lessons easy. We were simply driven point-blank against our books like soldiers against the enemy, and sternly ordered 'Up and at 'em. Commit your lessons to memory.' If we failed in any part, however slight, we were whipped; for the grand, simple, all-sufficing Scotch discovery had been made that there was a close connection between the skin and the memory, and that irritating the skin excited the memory to any required degree."

Though John was compelled at this time to store his memory with many things which in his mature judgment were mere "cinders and ashes," the mental discipline at least was a permanent gain. His knowledge of French was sufficient to open for him the treasures of French literature. A considerable section of his library was composed of French works on travel, exploration, and natural science. The Latin he had acquired so drastically from Cor-

derius' "Colloquies" and Turner's "Exercises to the Accidence," etc., proved useful in botanical and paleontological studies. Besides, the habit, formed early, of committing to memory choice passages from English literature was kept up by him till far into middle life and was commended to his children as a valuable means of education. In a letter to his daughter Wanda, on the occasion of his first visit to Dunbar, forty-four years after he had left his native town, he wrote: "You are now a big girl, almost a woman, and you must mind your lessons and get in a good store of the best words of the best people while your memory is retentive and then you will go through life rich. Ask mother to give you lessons to commit to memory every day, mostly the sayings of Christ in the gospels, and selections from the poets.' Find the hymn of praise in Paradise Lost, 'These are thy glorious works, Parent of good, Almighty!' and learn it well."

If in these formal elements of John's early education profit and loss were often doubtfully balanced, it was not so with the lessons he learned from Nature. He would have agreed with Henry Adams that life was a series of violent contrasts which gave to life their relative values. Winter and summer, cold and heat, town and country, school and vacation,

force and freedom, marked two widely different modes of life and thought. What is more, they all registered their effects in the sum total of what we call education. On the one hand was the wintry, storm-beaten town with its restraint, confinement, and school discipline; on the other, the country with its penetrable hedges, daisied fields, bird-song, and nest-hunting expeditions. There, in particular, were skylarks and mavises, the most universally beloved of all the birds of Scotland. John tells how he and his companions used to stand for hours on a broad meadow near Dunbar listening to the singing of the larks; or how they lay on their backs in competitive tests of keen-sightedness, each trying to outdo the other in keeping a soaring singer in sight.

Among the sublimer aspects of Nature that made an indelible impression upon the boy's mind were those of the stormy North Sea. Answering the letters of some Los Angeles school children in 1904, he tells how the school which they described brought to mind the two schools which he attended when he was a boy in Scotland. "They," he wrote, "were still nearer the sea. One of them stood so near that at high tide on stormy days the waves seemed to be playing tag on our playground wall, running up the sandy shore and perhaps just

touching the base of the wall and running back. But sometimes in wild storms the tops of the waves came flying over the wall into the playground, while the finer spray, carried on the wild roaring flood, drenched the schoolhouse itself and washed it fresh and clean. These great roaring storms were glorious sights. But we were taught to pity the poor sailors, for many ships were driven ashore on the stormy coast almost every year, and many sailors drowned. From the highest part of the playground we could see the ships sailing past, and often tried to guess whence they came, where they were bound for, and what they were carrying." The numerous drawings of ships that decorate the fly-leaves of John's schoolbooks may be regarded as telltale of what he saw from the windows and the playground of the Davel Brae school.

But there were many other thrilling experiences for the by-hours of a boy like Johnny Muir. He drank in by every pore the somber wildness of the rugged seashore about his native town, explored the pools among the rocks where shells, seaweeds, eels, and crabs excited his childish wonder when the tide was low, and found adventurous recreation by climbing the craggy headlands. Yet most impressive of all was the roar of North Sea tempests that,

mingling sea and sky, hurled mountainous waves against the black headland crowned by the ruins of Dunbar Castle. All this he saw and felt and explored with intense delight.

How ineffaceably these scenes and early experiences engraved themselves upon his memory is revealed by a passage in one of his notebooks. He was a day's journey from the Gulf of Mexico, on his thousand-mile walk through the South, when he suddenly caught a whiff of the sea, borne upon the wind. It was "the first sea-breeze," he writes, "that had touched me in twenty years. I was plodding along with my satchel and plants, leaning wearily forward . . . when suddenly I felt the salt air, and before I had time to think, a whole flood of long-dormant associations rolled in upon me. The Firth of Forth, the Bass Rock, Dunbar Castle, and the winds and rocks and hills came upon the wings of that wind, and stood in as clear and sudden light as a landscape flashed upon the view by a blaze of lightning in a dark night."

It is not surprising that John Muir, reflecting upon his Scotch boyhood, should in his later years have learned to regard the natural environment of Dunbar as the source of a valuable part of his early education. The heroic origins of the town are lost in dim traditions

that reach back at least a thousand years. Not the least of its romantic associations are represented by such names as Black Agnes of Dunbar, Joanna Beaufort, Earl Bothwell, and Mary, Queen of Scots. Just southeast of the town was fought the Battle of Dunbar in which Cromwell won a decisive victory over Leslie. All this, no less than the legends, superstitions, and folklore, which clung like moss about the surviving ruins of other days, could not but exert a strong influence upon the imagination of this active-minded boy.

But the fields and woods exerted by far the strongest attraction upon him. In spite of sure and severe punishments he and his companions regularly managed to slip away into the country to indulge their love of that "wildness," which, he says, "was ever sounding in our ears. Nature saw to it that besides school lessons and church lessons some of her own lessons should be learned, perhaps with a view to the time when we should be called to wander in wildness to our hearts' content. Oh, the blessed enchantment of those Saturday runaways in the prime of the spring! How our young wondering eyes reveled in the sunny, breezy glory of the hills and the sky, every particle of us thrilling and tingling with the bees and glad birds and glad streams! Kings may be blessed; we were

glorious, we were free, — school cares and scoldings, heart thrashings and flesh thrashings alike, were forgotten in the fullness of Nature's glad wildness. These were my first excursions, — the beginnings of lifelong wanderings."

CHAPTER II

LIFE ON A WISCONSIN FARM

1849–1860

One evening in 1849, when John and his younger brother David were studying their next day's lessons at Grandfather Gilrye's fireside, their father brought the information that they would start together for America the next morning. It was wildly exciting news, for it not only meant delivery from the tyranny of schoolmasters, but a life of adventure in a world full of untrodden wildernesses. Their grammar school reader had already kindled their imaginations with stories of American animal life, especially such as had come from the pen of the Scotch ornithologist Alexander Wilson and the American naturalist John James Audubon. News of the recent discovery of gold in California had run like wildfire over Europe and was the talk of the hour also in Dunbar. It is no wonder that the expectations engendered by such tales, together with the prospect of release from bitter school tasks, rendered the two lads "utterly, blindly glorious."

The only bitter strain in all this sweetness was the necessity of parting from Grandfather and Grandmother Gilrye. And yet they hardly realized what it meant to their grandparents to be left alone in their darkening old age, never to see their grandchildren again. The rosy anticipations of childhood left no room for the thought that their beloved grandparents might be near their own time of departure — in their case for "the land of the leal." In three years, as it turned out, both of them were gone. For the time being, however, Grandfather Gilrye exercised some control over the situation by insisting that his daughter and the younger children must not be exposed to the hardships of pioneering in a new country before a comfortable house had been built for their reception. Hence it was decided that only John, David, and Sarah were to accompany their father to America.

In those days large numbers of Scotch emigrants went to the wilds of Upper Canada and Daniel Muir also set out with the intention of joining some Canadian settlement of his compatriots. On shipboard, however, the majority opinion favored the States, especially Wisconsin and Michigan, where according to common report the forests were less dense and consequently more easily cleared. These advantages

were bound to weigh heavily with a man who feared to delay the reunion of his family by the choice of a difficult homestead. Before the end of the voyage he had decided in favor of the western United States, resolving to be guided in his final choice by what he might learn on his westward journey. On reaching Buffalo, the reported preëminence of Wisconsin as a wheat-producing State left no further doubt in his mind. From Milwaukee his cumbersome luggage was transported by wagon for a hundred miles over miry roads to the little town of Kingston, where a land-agent helped him to homestead a quarter-section of land amid sunny open woods beside a small lake.[1] A shanty was hastily erected and the household goods stowed away in it until a more permanent frame house could be built. Before winter came the house was ready for occupancy, and in November, 1849, Mrs. Muir and the rest of the family arrived from Scotland.

The wild nooks about Fountain Lake, and especially the lake itself, at once took a unique place in John's affections. Its beautiful water-lily pads, its bordering meadows full of showy sedges, orchids, and ferns, the great variety of fish, and the abundant population of ducks

[1] The "Fountain Lake" of Muir's memoirs, but now known sometimes as "Muir's Lake," sometimes as "Ennis Lake."

and muskrats which it harbored, excited his unbounded curiosity and admiration. It was in this lake that he became an expert swimmer, though on one occasion he nearly lost his life through a momentary lack of self-possession, and punished himself for it afterwards in characteristic Scotch fashion by rowing out into the middle of the lake and diving off into deep water again and again, shouting, "Take that!" each time as he did it.

The raptures produced in eleven-year-old John by this sudden transplanting from the North Sea coast of Scotland to this lake and the flowery oak-openings of Wisconsin made an ineffaceable impression and even in retrospect taxed to the utmost his powers of description when he was past three-score and ten. "This sudden plash into pure wildness — baptism in Nature's warm heart — how utterly happy it made us!" he writes in his boyhood reminiscences: "Nature streaming into us, wooingly teaching her wonderful glowing lessons, so unlike the dismal grammar ashes and cinders so long thrashed into us. Here without knowing it we still were at school; every wild lesson a love lesson, not whipped but charmed into us. Oh, that glorious Wisconsin wilderness! Everything new and pure in the very prime of the spring when Nature's pulses were beating

highest and mysteriously keeping time with our own! Young hearts, young leaves, flowers, animals, the winds and the streams and the sparkling lake, all wildly, gladly rejoicing together!"

But it was not to be all joy, this wilderness life. The golden mantle of boyish illusions was soon to be lifted from stern realities. For when the serious work of subduing this wilderness into a farm began, John found frequent occasion to remember the prophecy of Grandfather Gilrye as in boyish exuberance John tried to tell him about all the wonderful things he and David were going to see and do in the new world. "Ah, poor laddies, poor laddies," he said in a trembling voice, "you'll find something else ower the sea forbye gold and sugar, birds' nests and freedom fra lessons and schools. You'll find plenty of hard, hard work." Fortunately few forms of work are all toil and drudgery to a gifted lad, and the environment permitted some undesigned good to spring from the iniquity of child labor.

So it happens that the noble part which domestic animals play in the development of an impressionable boy, in this case a future naturalist, is vividly and touchingly reflected in John's recollections of his four-footed fellow laborers on his father's farm. Foremost among

them were the oxen which in pioneer days did service on Western farms instead of horses or mules. He shrewdly observes that the experience of working with them enabled him and his brother to know them far better than they should had they been "only trained scientific naturalists." To Muir one ox was not like another — mere animated machines which all reacted alike to any given stimulus or situation. For he had seen one ox learn to smash pumpkins with his head while others awkwardly tried to break into them with their teeth. "We soon learned," he writes, "that each ox and cow and calf had individual character."

Later, when the oxen were displaced by horses, he remarked the same difference of sagacity and temperament in them. One was intelligent, affectionate, and teachable, the other balky and dull. Readers of his boyhood memoirs will also recall his sympathetic description of Jack the Indian pony; of its fearlessness, playfulness, and gentleness. The farm was evidently the place where he learned to appreciate what he called the "humanity" of animals and man's kinship with them. This sympathetic attitude made it easy for Muir to observe evidence of animal intelligence not only in his humble companions-in-labor on the farm, but when he came to study

animals in their wild state he was prepared to look there also for differences of intelligence; and not alone between various types of animals, but between individuals of the same species. In other words, to him much the most interesting thing about an animal was its mind and the use to which it put the same. On this point he differed widely with John Burroughs who seemed to become a more and more outspoken champion of the mechanistic theory of animal behavior which explains the actions of animals in terms of "blind instinct." "Blind" seemed to be coextensive in meaning with "unreasoning," thus reducing the actions of all individuals of a given species of animal to the particular brand of instinct characteristic of the species. On one occasion when Burroughs and Muir, meeting at the house of a mutual friend in Berkeley, discussed this issue, Muir in the judgment of those present scored heavily against his opponent. And this was due not to his superior conversational and argumentative powers, but to fact-seasoned conclusions matured amid the observations of a lifetime. It was refreshing and amusing to hear him go after the so-called animal psychologists and behaviorists with their "problem boxes," etc., bent on making out, in some cases at least, that animals are nothing but "ma-

chines in fur and feathers." On the other hand he had no sympathy with the professional observers of wonders who found it profitable not to distinguish between the imagination of the wild and their own wild imaginations.

Now that so competent and well-informed a naturalist as William T. Hornaday has presented the personal observations of a lifetime in his book "The Minds and Manners of Wild Animals," and has set forth therein a point of view substantially in accord with that of John Muir, we may expect the mechanistic interpreters of animal "behavior" to vacate the stage for a time. It ought to be added that Muir as early as 1867 confided to his notebook his belief that one of the greatest hindrances to a fruitful study of the intelligence and individual characteristics of animals was the average human being's insufferable self-conceit; that his egotism magnifies his lordship of creation until he is incapable of seeing that animals "are our earth-born companions and fellow mortals." To the fact that the lord-of-creation idea has an abused Biblical origin he attributed the fact that the "fearfully good, the orthodox," are the first "to cry 'heresy' on every one whose sympathies reach out a single hair's breadth beyond the boundary epidermis of our own species. Not content with taking all of

earth, they also claim the celestial country as the only ones who possess the kind of souls for whom that imponderable empire was planned." To this same effect is an eloquent passage in "My Boyhood and Youth"[1] where he touchingly describes the death of his favorite horse Nob, over-driven by his father in going to a church meeting. After remarking that "of the many advantages of farm life for boys one of the greatest is the gaining of a real knowledge of animals as fellow mortals," worthy of respect and love, he adds: "Thus godlike sympathy grows and thrives and spreads far beyond the teachings of churches and schools, where too often the mean, blinding, loveless doctrine is taught that animals have neither mind nor soul, have no rights that we are bound to respect, and were made only for man to be petted, spoiled, slaughtered, or enslaved."

That John Muir survived the relentless severity with which his father held him to adult labor when he was a mere boy probably was due less to his physical vitality than to the buoyancy of his temperament. Called at six in the morning in winter-time, he had to begin the usual chores of feeding horses and cattle, fetching water from the spring at the foot of the hill, bringing in wood and sharpen-

[1] Page 109.

ing tools — all before breakfast. Immediately afterwards began the heavier work of the day, such as wood-chopping, fencing, fanning wheat, and various other tasks, indoors and out. The only means of warming the house was the kitchen stove, and even in this he was not allowed to kindle a fire before hastening to the chores. With Spartan fortitude he had to squeeze his chilblained feet into wet socks and soggy boots frozen solid. No wonder that in the memoirs of his boyhood he remembered with regret how great heart-cheering loads of oak and hickory were hauled with misguided industry into waste places to rot instead of being laid up for use in a desperately needed large fireplace. It was a very unusual boy who amid this senseless aggravation of the natural hardships of pioneer farm life could find it in his heart "to enjoy the winter beauty —the wonderful radiance of the snow when it was starry with crystals, and the dawns and sunsets and white noons, and the cheery, enlivening company of the brave chickadees and nuthatches."

The summer chores and field labor were different, but not less exacting. The day began earlier and lasted longer. Among detached jottings under the heading of "Farm Work" in one of his notebooks I find the following:

We had to work very hard on the farm in summer, mowing, hoeing, cradling wheat, hauling it to the barns, etc. No rest in the shade of trees on the side of the fields. When tired we dared not even go to the spring for water in the terrible thirst of the muggy dog-days, because the field was in sight of the house and we might be seen. . . . We had to make ourselves sick that we might lay up something against a sick day, as if we could kill time without injuring eternity. The incessant anxiety and strain of some is a well-nigh incurable disease. . . . A stitch in time saves nine, so we take a thousand stitches to-day to save nine to-morrow.

John being the eldest boy, the greater part of the hard work of the farm naturally fell to him. This included the splitting of rails for the zigzag fences, mostly from trees so knotty and cross-grained that the making of a hundred rails a day involved the expenditure of much energy and not a little skill. It was fatiguing work, so much so that his father, after trying rail-splitting with him for a day or two, left it all to John.

A form of labor which he remembered with special aversion was the hoeing of corn before the days of cultivators. Under his father's relentless drive the haying and harvest season bore down hard upon the growing boy. A natural ambition to excel made him vie with the hired men in mowing and cradling, and at the

age of sixteen John was accustomed to lead the line. He was no doubt right in thinking that this very severe labor so far exceeded his strength that it checked his growth.

But there was no one in those days to warn him of the dangers of overwork, least of all his father. The latter's unnatural severity toward his children made so indelible an impression that when John recorded the memories of his boyhood he treated with great frankness an aspect of family life which ordinarily autobiographers veil in silence. But since he had, as will appear later, a humane purpose in exposing to public view this aspect of his early home experience, it is clearly a biographer's duty not to ignore a situation already created, though some might question the filial propriety of introducing it in the first place.

What John describes as "the old Scotch fashion of whipping for every act of disobedience or of simple, playful forgetfulness" was continued by Daniel Muir in the Wisconsin wilderness. Most of the whippings fell upon John and were "outrageously severe, and utterly barren of fun." But in telling about the occasion on which he was to receive a beating for having lost his father's ox-whip by tying it to the dog's tail, John makes no concealment of the fact that he was often a willful and ex-

asperating boy. For when he had escaped a thrashing because David, commanded to find a switch, had brought an unmanageable burr-oak sapling, he engaged in the same sort of mischief the moment his father was out of sight.

But the whippings, however severe, were less serious in their consequences than the excessive grind of work demanded. "Even when sick," writes John, "we were held to our tasks as long as we could stand. Once in harvest-time I had the mumps and was unable to swallow any food except milk, but this was not allowed to make any difference, while I staggered with weakness and sometimes fell headlong among the sheaves. Only once was I allowed to leave the harvest-field — when I was stricken down with pneumonia. I lay gasping for weeks, but the Scotch are hard to kill and I pulled through. No physician was called, for father was an enthusiast and always said and believed that God and hard work were by far the best doctors."

Though more excessively industrious than any of his neighbors, Daniel Muir was by no means peculiar in his addictedness to the vice of over-industry. It was a common failing of settlers from England and Scotland, and John Muir doubtless was right in attributing it to their suddenly satisfied land-hunger and the

desire to keep their large farms as neat and well tilled as the little garden patches which they had left behind them overseas. But, whatever the cause, there was no doubt about the frenzied manner in which the Muir household was held to the tasks of the farm. To quote John's memoirs again:

> We were all made slaves through the vice of over-industry. . . . It often seemed to me that our fierce, over-industrious way of getting the grain from the ground was too closely connected with grave-digging. The staff of life, naturally beautiful, oftentimes suggested the grave-digger's spade. Men and boys, and in those days even women and girls, were cut down while cutting the wheat. The fat folk grew lean and the lean leaner, while the rosy cheeks brought from Scotland and other cool countries across the sea faded to yellow like the wheat. . . . We were called in the morning at four o'clock and seldom got to bed before nine, making a broiling, seething day seventeen hours long loaded with heavy work, while I was only a small stunted boy; and a few years later my brothers David and Daniel and my older sisters had to endure about as much as I did. In the harvest dog-days and dog-nights and dog-mornings; when we arose from our clammy beds, our cotton shirts clung to our backs as wet with sweat as the bathing-suits of swimmers, and remained so all the long, sweltering days.

The losses sustained by John, both in bodily vigor and in intellectual growth, under the

severe farm régime of his father, were the subject of frequent reflection by him in after-years. "Pondering on the number who have died and crumbled into dust," he writes in one of his journals, "the farmer may say that he is farming the dust of his ancestors and compelling these ancestors to take refuge in turnips and apples. . . . We might live free, rich, comfortable lives just as well as not. Yet how hard most people work for mere dust and ashes and care, taking no thought of growing in knowledge and grace, never having time to get in sight of their vast ignorance."

This wearing labor of clearing and setting in order the Fountain Lake farm continued uninterruptedly for eight years. By that time it had been fully brought under the plow, fenced and provided with stables for cattle and horses. The original rude burr-oak shanty had been replaced with a more roomy frame house. Its former site on the hill overlooking the lake now is marked only by a depression and by a few stones that may have formed part of the foundation. In 1856 Sarah Muir was married to David M. Galloway, who bought the Fountain Lake farm [1] from his father-in-law. Thus Sarah succeeded her mother as mistress of the

[1] It has changed ownership several times since then and been subdivided. David Galloway sold it to James White-

Fountain Lake home, where a warm welcome always awaited John when he returned from his wanderings.

The elder Muir, after relinquishing the farm to his son-in-law, bought half a section of uncleared land about four miles southeast of the original homestead. This new farm was situated twelve and a half miles northeast of Portage and four miles from the Fox River. The summit of a gentle slope covered with an open stand of fine hickory trees was selected as a site for a new house. Its erection in 1857 marked the beginning of another period of hard and exhausting labor. John at this time was nineteen years old and somewhat stunted in his growth, but he prided himself on his physical hardihood and his ability to endure all that was put upon him.

The Hickory Hill house was a simple two-story frame structure, which is still in existence, though veneered with brick and shorn of a lean-to shown in Muir's sketch published in "The Story of My Boyhood and Youth." It is surrounded by wide-spreading box elders, willows, and apple trees which are said to date from the days of the Muirs. The local tradi-

head and he in turn to Samuel Ennis. In 1920 the particular tract on which the Muir house stood was owned by Howard McGwinn.

tion is rendered plausible by the age and size of the trees. Especially striking among them is a willow near the well around which by dint of sober necessity the life of the farm revolved. For unlike the first farm, there was on it "no spring or stream or meadow or lake." Yet water was indispensable and to John was assigned the task of finding it.

Long before he struck water by sinking a ninety-foot shaft he had entered into the experience of those "who passing through the valley of weeping make it a well." After the first ten feet he struck a stratum of fine-grained sandstone through which he laboriously chipped his way for eighty feet with mason's chisels. Day after day for months he chipped away from dawn until dark. His father, apparently entirely ignorant of the dangers of choke-damp, would lower him by means of a bucket in the morning and draw him up again with the loosened chips at noon. Immediately after the noonday meal he was lowered again and left until night. One morning, as he was putting some left-over chips into the bucket with which he had just been lowered, he began to sway and sink under the effect of carbonic-acid gas that had settled at the bottom of the shaft during the night. His father, alarmed by his silence, and finding that John was not in the

bucket when he heard his feeble-voiced request to be taken out, roused him from his stupor sufficiently by his shouted commands to make him get into the bucket. He was unconscious and all but suffocated when he reached the surface. But after a few days of rest and recovery he was lowered again, with some precautions against choke-damp, to chip down another ten feet, when water was struck. That was more than sixty years ago and ever since then the well has furnished an adequate supply of water for the farm. But one shudders to reflect how much of the imperishable wealth of the human spirit might have been sunk forever in that Wisconsin well.

In the month of August, 1858, during the Hickory Hill farm period, there occurred an event which made a deep impression upon John's memory. It was the death of a poor feeble-minded man who on account of his physical frailty, and some engaging social accomplishments, was both pitied and beloved among the neighbors. Many deemed him an entertaining singer of folk-songs and he had a gift of impromptu rhyming. It was generally reported and believed in the neighborhood that his brother, a blacksmith preacher with whom he was making his home, often beat him and forced him to work beyond his

strength, and that one morning he pitched forward and died on a pile of stovewood which he was chopping.

When fifty-five years later Muir was writing the story of his boyhood, the incident was still vivid in his memory and he gave a peculiarly moving account of it such as he only could write when his feelings were deeply stirred. Appearing first in the "Atlantic" it fell under the eye of the blacksmith preacher's son, a boyhood friend of John's of whom he had lost all trace. While no names were given he recognized in the person pilloried by Muir none other than his own father, and wrote John a dignified, friendly letter, pointing out certain mistakes and the fact that it conveyed an erroneous impression concerning his father's character. "I desire in conclusion," said the writer, "to emphasize the respect and admiration I have always entertained for you, beginning with the day we met where the road from your Father's place intersected with what was known as the 'River road,' following the holidays of '63 and '64, when in company we walked twelve miles to Portage and I listened to your conversation, your life and experience at the University to which you were returning. The advice and counsel given caused you to enter into and become a potent

factor in my life. Though you did not know it, and have forgotten the circumstances, with me it remains an abiding memory and in the years that followed proved a stimulus and incentive to untiring effort. I mention this to assure you that my esteem and faith in you remain unchanged, and that *you* may also know father was not the blot upon the landscape of that glorious wilderness you believe and have pictured him to be."

Muir's reply is of unusual interest and biographical value, because it reveals ruling motives of his life and furnishes the reason why he disregarded customary reserve in presenting the disciplinary side of his boyhood training.

MARTINEZ, CALIFORNIA
February 13, 1913

DEAR FRIEND:

Your painful letter came to me in my lonely library writing den while hard at work on an Alaska book which should have been written a score of years ago. Seldom, if ever, have I received a letter that has given me so much mingled pleasure and pain — pleasure in hearing from a friend of my boyhood, and learning from you, the best and final authority, that the reports on the use of the Solomonic rod in your father's household, gleaned half a century ago

from neighbors, including my sisters, brothers, and brothers-in-law, were, to say the least, grossly exaggerated; and pain from having been led to write by my lifelong hatred of cruelty that which has given you pain.

I never did intentional injustice to any human being or animal, and I have directed my publishers to cancel all that has so grievously hurt you. For a full understanding of the matter I wish to inform you that the four articles that have appeared in the November, December, January, and February numbers of the "Atlantic" were taken from the manuscript of a book entitled, "My Boyhood and Youth," being the first volume of my autobiography, soon to be published. I corrected the last of the galley proofs several weeks ago and wrote the publishers that they need not send me the page proofs since their proof-readers were so careful and able. I have not seen any of them, and am unable to tell how far the work has progressed. Possibly part or all of this first volume may be stereotyped, or even printed. If not printed, the unfortunate page will be cut out of the plate at whatever cost.[1] And at the worst, only a comparatively small first edition may have been printed, and the

[1] His correspondent disclaimed all desire to have the offending account omitted, so it has been allowed to stand.

part that has caused so much trouble will not appear in the ten or twenty following editions.

I have good reason, as doubtless you know, to hate the habit of child-beating, having seen and felt its effects in some of their worst forms in my father's house; and all my life I have spoken against the habit in season and out of season. But you make a great mistake in taking what I have written as a judgment or history of your father's character, as I hope to show in another volume. You doubtless know that character is made up of many particulars, and that it is grossly unfair to try the whole general character of any man by one particular, however striking and influential it may be. I was far from doing so in sketching the evil of child-beating from which we both have so bitterly suffered.

When the rod is falling on the flesh of a child, and, what may oftentimes be worse, heart-breaking scolding falling on its tender little heart, it makes the whole family seem far from the Kingdom of Heaven. In all the world I know of nothing more pathetic and deplorable than a broken-hearted child, sobbing itself to sleep after being unjustly punished by a truly pious and conscientious misguided parent. Compare this Solomonic treatment with Christ's. King Solomon has much to answer

for in this particular, though I suppose he may in some measure be excused by the trying, irritating size of his family.

Your father, like my own, was, I devoutly believe, a sincere Christian, abounding in noble qualities, preaching the Gospel without money or price while working hard for a living, clearing land, blacksmithing, able for anything, and from youth to death never abating one jot his glorious foundational religious enthusiasm. I revere his memory with that of my father and the New England Puritans — types of the best American pioneers whose unwavering faith in God's eternal righteousness forms the basis of our country's greatness.

Come and see me, and let us become better acquainted after all these eventful years. . . . You must now be nearing three score and ten. I will be seventy-five in a few months, and in the sundown of life we turn fondly back to the friends of the Auld-lang-syne. So I am now doing, and am wishing that you may be assured that I am,

Faithfully your friend

JOHN MUIR

In accordance with a fairly common custom among God-fearing pioneers of earlier days

morning and evening family worship was regularly observed in the Muir household. But how easily morning prayers may become a devastating substitute for a day of real religion was apparently exemplified glaringly in both these households. Under such circumstances children often react sharply, not only against the external forms, but also against the substance of religion. The religious convictions of a shallower nature than John Muir's would never have survived the bigotry and rigor of his father's training. The latter, soon after moving to the Hickory Hill farm, conceived the notion of devoting all his time to Bible study, leaving to John and his brother David all the heavy work of the farm. John in the meantime, after much brooding, had evolved the plan of a clock which, when attached to his bed, would set him on his feet at any desired time in the morning. Having thought it out clearly he employed his meagre spare time, and any odd moments he could snatch from work, to carve and whittle this novel clock in wood. To keep it hid from his father he concealed it in a spare bedroom upstairs. One day, however, his father accidentally discovered it and the bad news was promptly conveyed to John by one of his sisters. He had good reason to fear that his father would imme-

diately commit his machine to the fire, for the employment of even his scanty spare time upon such tasks was severely disapproved by his father. But nothing happened until some days later when his father introduced the subject at dinner time. "John," he inquired, "what is that thing you are making upstairs?" Meal-times to Daniel Muir were sacramental occasions when no light conversation was permitted, and where every one was expected to cultivate an attitude of mind more befitting the Lord's supper than a family meal. Neither the time nor the subject boded any good for John, so in confusion and despair he replied that he did not know what to call it. But after some heckling John suggested that it might be called "an early-rising machine."

To appreciate the effect of this remark upon the elder Muir we must remind the reader that during the preceding winter John had been getting up at one o'clock to gain time for reading and for the construction of a miniature self-setting sawmill. His father had involuntarily given occasion for this extravagantly early rising, for one evening when ordering John to bed at eight o'clock as usual, as he was lingering a few minutes in the kitchen to read church history, he added conciliatingly that if he was set on reading he might get up in

the morning as early as he liked. John rose at one o'clock that very night, feverishly and pathetically elated over the possession of five hours of time that were his own. The cold would not let him read, so during the winter he invested his new "time-wealth" in contriving and making all kinds of mechanical inventions. His workshop was in the cellar underneath his father's bedroom and he must often have disturbed his sleep. But having given his word he stood to it with Scotch fortitude although he remonstrated against the unreasonable use which John was making of the permission granted. It does not seem to have occurred to him that a boy so eager to learn was entitled to some margin of leisure for self-improvement during normal working hours.

Such in brief was the background of the occasion on which Daniel Muir broke the sacramental silence of the noonday meal with an inquiry about the strange contrivance John was whittling. To learn that it "might be called an early-rising machine" was almost too much even for his gravity. But he quickly recovered his usual solemnity of face and voice and asked in a stern tone, "Do you not think it very wrong to waste your time on such nonsense?" John meekly replied that he did not think he was doing any wrong. "Well,"

replied his father, "I assure you I do; and if you were only half as zealous in the study of religion as you are in contriving and whittling these useless, nonsensical things, it would be infinitely better for you. I want you to be like Paul, who said that he desired to know nothing among men but Christ and Him crucified."

Such attempts to set religion at variance with the boy's innocent and commendable desire to develop by his own efforts his manual skill and mechanical ingenuity would have broken the spirit of most lads similarly situated. It is a typical instance of how religiousness, warped out of all semblance to real religion by bigotry and ignorance, may do grievous harm to its victims. But though he experienced a sense of injury and rebellion at the time, he lacked the knowledge and maturity to unravel the complex of fictitious dilemmas which his father propounded. Fortunately, the difficulties thrown in his way only increased his tenacity of purpose and in later years he saw the way out clearly enough. "Strange to say," he wrote in "My Boyhood and Youth," "father carefully taught us to consider ourselves very poor worms of the dust, conceived in sin, etc., and devoutly believed that quenching every spark of pride and self-confidence was a sacred duty, without realizing that in so doing he

might at the same time be quenching everything else."

Luckily, as all his readers know, he escaped the type of reaction which under like circumstances has carried other strong characters into lifelong antagonism to religion. It had no such effect upon John. Indeed, one letter at least, which survives from this period of his boyhood, shows that he did his best to be an Apostle Paul to his own youthful generation, writing long, appealing letters to other boys of the vicinity, urging them to make a "decision for Christ." Their own letters are laden with phrases about the glories of heaven, the shortness and uncertainty of life, the appalling length of eternity, and the importance of being prepared for the fearfully searching inquiries of the day of judgment. Much of this is no doubt a part of the conventional religiousness of the time, fanned into flame seasonally by camp meetings and traveling evangelists. It must, however, be reckoned among the actions and reactions that went into the making of John Muir.

The invention and construction of his first wooden clock was, as we have seen, the outgrowth, in part, of a desire to secure more time for reading. "You say in your letter," writes a friend in March, 1858, "that time to stow wis-

dom-bins is precious." So it was for a boy who, by his own testimony, had to consider himself fortunate if he got five minutes' reading after supper before his father would notice the light and order him to bed. "Night after night," he writes, "I tried to steal minutes . . . and how keenly precious those minutes were, few can nowadays know. Father failed perhaps two or three times in a whole winter to notice my light for nearly ten minutes, magnificent golden blocks of time, long to be remembered like holidays or geological periods."

In this connection the following entry, taken from one of his notebooks, tells more between the lines than in them, being a reflection of the remembered intensity with which the lad pursued his aims. "Many try to make up time," he writes, "by wringing the slumber out of their pores. Not so when I was a boy, springing out of bed at one o'clock in the morning, wide-awake, without the shadow of a yawn, no sleep left in a single fiber of me, burning and bright as a tiger springing on its prey."

John mentions his fifteenth year as the probable time when he began to relish good literature with enthusiasm. Certain it is that about the time of the family's removal to Hickory Hill farm this enthusiasm was a steady flame. One can only guess at the length of the

strides he might have made could he have had the advantages of a first-class school. But such an opportunity was not to fall to his lot. Between the time of his departure from Scotland and the year in which he entered the University of Wisconsin he obtained only two months of additional schooling. Where this was received is uncertain, but it probably was in the old Fox River School No. 5 which then stood in a patch of dense forest not far from the first farm. In an undated letter of the fifties, evidently from a schoolmate, the writer expresses the wish that they might meet again "at the schoolhouse and speak pieces and sing our old 'Press Onward' song as we used to last winter." The same correspondent wonders what has become of the teacher, whether he still occasionally thinks of his pupils and the merry times they used to have. "I wish we might meet him again in the old schoolhouse and hear him call us to order and listen to some of his wonderful speeches."

Among John's papers of this period is the manuscript of a juvenile poem of some length entitled "The Old Log Schoolhouse," and a memorandum, apparently of the same date as the poem, declares that it was "written in 1860." Since that was the year in which he left home, it is quite possible that it refers to the

above-mentioned school. Of more interest than the local color in these lines of blank verse is the young author's ability to detach himself from his environment and to indulge in serio-comic criticism of its defects and crudities. First comes a word-picture of the school, as follows:

"Old log schoolhouse, warped, and gnarled, and leaky;
Opening thy crooked ribs and seams and knots
To rain and snow and all the winds of heaven
To keep thee sweet and healthy! Many a storm
Hath played wild music beating on roof and gable,
Loosely boarded, telling all the weather,
As if some wondrous instrument thou wert,
Speaking aloud, through all times and seasons,
Thy parts of speech so strangely varied, mixing
With stranger speech within, called English grammar.
While yet the trunks of which thy walls are built
Stood on the hills with outspread leaves and branches,
A shelter, then, thou wert for gladsome birds,
That made sweet music ring about their nests.
And still a noisy nest thou art and shelter
For callow, birdlike children soft and downy,
Logs woven about them, piled and jointed,
Crossed like sticks and straws, and roughly plastered
With clay and mud like nests of mason robins."

An enumeration of what the old school has heard within its walls includes some humorous arithmetic and the hatchet of George Washington that

"Hath hacked small readers voices and the nerves
Of teachers, in tones strident, rough, and rusty,

In lessons never-ending, never-mending.
With grammar, too, old schoolhouse, thou hast suffered,
While Plato, Milton, Shakespeare, have been murdered,
Torn limb from limb in analytic puzzles,
And wondrous parsing, passing comprehension,
The poetry and meaning blown to atoms —
Sad sacrifices in the glorious cause
Of higher all-embracing education."

"Players, preachers, showmen, singers, sinners" have all taken their turn in shaking the school's old oaken ribs, but never have its walls rung with stranger sounds than

"Class-meeting converts' speeches; low, tearful,
Sobbing promises to walk the narrow way
Henceforward, and prayers for light and strength,
Conscious of weakness and they know not what.
Not so the brawny fighting backwoods brother.
With jaw advanced, and bulging muscles rigid,
He shouts and stamps and makes thy old logs rattle
With rough defiance, calling 'Hither come
Ye men or devils, come all together,
Ye who would bar the narrow way to heaven.
Armed for the fight with Christ, my Captain, leading,
I fear no foe earthborn or from the pit.
Come on! come on!' as though he were addressing
Some foe in sight, yet maybe semi-conscious
The foe was far away, and like to stay far.

Every ism and doxy hath been sounded
On every key within thy patient walls
Old schoolhouse; blasts of strong revival,
Enough to blow thy dovetailed logs asunder,
While souls were being saved, and pulled, and twisted
All out of shape, till they no longer fitted
The frightened bodies that to each belonged.

Playing at judgment day in lightsome humor,
Calling, 'Ho! all ye saints that love the Lord,
Rise up now quickly and take these benches
On the right side there. And now ye sinners
Cross over to the left, and stand in row,
And be ye separate as sheep and goats
That I may count ye, and get the true statistics
To give the Master and myself some notion
How fare these flocks supernal and infernal
In this section of his backwoods pastures.'
Then halting suddenly to blow his nose
And spit, and bite some fresh tobacco,
He waves his hand and cries, 'Now all be seated,
And mix up as ye will, but pray remember
When all your hardened cases come to trial
In the upper court, I fairly warned ye
To settle here with me as Heaven's agent, —
To get a ticket by the gospel route, —
The only route through our denomination."

In conclusion the young poet foresees the time when the schoolhouse will have fallen under the doom of "dust to dust . . . perchance to sift and drift in vapor, far and wide o'er hill and dale and grassy plain, to take new forms of beauty." And on this passage down the ages "with Nature" he bids it a fond farewell.

To the discerning reader these excerpts will reveal at once the fact that he was saturated with the rhythm of Miltonic verse, that he was developing his critical faculty and his sense of word values, and that he had achieved a considerable degree of mental independence in a strongly repressive environment.

These gains had obviously not been accomplished by the only two months of additional schooling which he received between the ages of eleven and twenty-two, for he had during this period been wholly dependent upon his own efforts for his further education. What ways and means did he employ?

In his memoirs Muir has told how in one summer he worked through a higher arithmetic without assistance by using the short intervals of time between the noonday meal and the afternoon start for the fields. Algebra, geometry, and trigonometry were taken up in the same manner. Even the shorthand of that day excited his practical interest. But a broad training in literature and science was more difficult to secure in a backwoods farming community because of the lack of suitable books. Such raw materials of English literature as the neighborhood afforded were faithfully used by him. Through acquaintanceship and correspondence with boys on neighboring farms he arranged for the exchange of such books as their homes afforded. Reading became a consuming passion with him, and he seems to have had a marked preference for poetry of which he was accustomed to learn favorite passages by heart, rolling them like sweet morsels under his tongue. Nor were the practical aspects

of such study neglected, for in extant correspondence with his young friends they acknowledge the receipt of rhymed letters and poems. Interestingly enough one of the poems was an elegy on the death of an enormous tree whose felling on a neighboring farm had been described to him by one of his correspondents as a very laborious task.

John has named the age of fifteen as the time when the realm of poetry began to open to him like the dawn of a glorious day, and to the same period of his youthful development he assigns the "great and sudden discovery that the poetry of the Bible, Shakespeare, and Milton" is a source of "inspiring, exhilarating, uplifting pleasure." When the book supply of the neighborhood was exhausted he had to find other ways of meeting his intellectual wants. Farm products in the backwoods were mostly taken in trade and money was scarce. But by careful saving of pennies and small sums which John secured in one way or another he managed to buy such longed-for books as were not ruled out by the rigid censorship of his all-Bible father. In the course of a few years he was able to count among his treasures "parts of Shakespeare's, Milton's, Cowper's, Henry Kirk White's, Campbell's, and Akenside's works, and quite a number of others seldom

read nowadays." Wood's "Natural History," and the once famous "Ancient History" of the French historian, Charles Rollin, seem also to have made memorable additions to the furniture of his mind.

Included in the slender stock of books accessible to him among the neighbors were the novels of Sir Walter Scott. But these he had to read in secret because his father strictly forbade the reading of novels as a sinful indulgence. The latter was, however, induced to buy Josephus' "Wars of the Jews" and d'Aubigné's "History of the Reformation," and John vainly did his best to get him to buy Plutarch's "Lives," until he contrived to circumvent paternal prejudices by suggesting that the old Greek writer might throw valuable light upon the food question. For Daniel Muir had taken up vegetarianism and was seeking to convince his family that the Creator never intended man to eat flesh. It mattered little to John that the old pagan could render no decision on the subject of man's proper diet. The main point, as he says, was that "so at last we gained our glorious Plutarch."

John's father, as indicated in the opening chapter, was a type of the old traditionalist for whom the Bible's authoritativeness was all of one piece and, like many another biblical lit-

eralist, he became an easy victim of his own theory. Blinded by his presuppositions, his Bible study plunged him only into deeper mental confusion. John, possessing a thorough knowledge of the Bible himself, was quick to take advantage of the weakness of his father's bibliolatry. After the Plutarch had been secured, he went to the rescue of his mother against his father's vegetarian fad by pointing out that when the Lord commanded the ravens to feed Elijah in hiding by the brook Cherith "the ravens," according to the Scriptures, "brought him bread and flesh in the morning, and bread and flesh in the evening." That ended the discussion. Daniel Muir acknowledged himself mistaken, for the Bible was his final arbiter in everything, and since the ravens were divinely commanded to bring flesh to the prophet it could not be otherwise than legitimate food.

A similar argument ensued when John was caught reading Thomas Dick's "The Christian Philosopher." This book, by a Scotch contemporary written in a popular and engaging style, was very influential in its time. The aim of the author, in his own words, was "to illustrate the harmony which subsists between the system of nature and the system of revelation, and to show that the manifestations

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of God in the material universe ought to be blended with our view of the facts and doctrines recorded in the volume of inspiration." John, to his great disappointment, found that the word "Christian" in the title was not sufficient to overcome in his father's mind the suspicions aroused by the word "Philosopher." Timothy, he reminded John, had been advised to avoid "oppositions of science falsely so called," and the Colossians had been warned, "Beware lest any man spoil you through philosophy and vain deceit." John ventured to defend philosophy and science on the ground of their practical usefulness, but his father insisted that the Bible contained all the science and philosophy needed for the conduct of life. "But your spectacles," interposed John, "without which you cannot read the Bible, cannot be made without some knowledge of the science of optics." "Oh!" replied his father, "there will always be plenty of worldly people to make spectacles." Here, again, John found an opportunity to score on his father's literalism by quoting from Jeremiah a passage referring to the time when "all shall know the Lord from the least of them to the greatest of them," "and then," he asked, "who will make the spectacles?" But this time his father refused to acknowledge his discomfiture and

ordered him to return the book to its owner. Daniel Muir remained inflexibly hostile to anything that savored of a "harmony" or compromise between "nature" and "revelation" such as this book offered. John's mind, however, was beginning to trend in precisely that direction, and while for the time being he respected his father's ban of the book, he also records the fact that he "managed to read it later."

An estimate of the influence and importance of the farm period upon Muir's future career would not be complete without considering what he did in his cellar workshop. If the propriety of linking his love of reading with his love of "whittling" were not already sufficiently justified by the practical use to which he put his wooden clock, his own title — "Knowledge and Inventions" — for chapter seven of "My Boyhood and Youth" would satisfy the need of further warrant for so doing. By means of the early-rising attachment, which he perfected more and more, his clocks not only measured but created time and opportunity for him, so that knowledge and inventions were jointly furthered by the skill of his hands.

The invention of the self-setting sawmill and the wooden clock was speedily followed by

other mechanical contrivances. One of these was a hickory clock shaped like a scythe to symbolize the scythe of Father Time. The handle bore the legend "All flesh is grass," and the pendulum in the form of a bunch of arrows, suggested the flight of time. This clock excited much admiration both at home and among the neighbors. It indicated the days of the week and the month as well as the diurnal time, and was still capably performing its functions fifty years later.

The success of this contrivance encouraged him to invent a still more ambitious clock, one with four dials, like a town clock, designed to be placed on the peak of the barn roof so that it could be read from the fields. But before it was finished his father stopped him, interposing the objection that it would attract too many people to the barn. Neither would he for the same reason allow him to put it in the top of an oak tree near the house where the two-second fourteen-foot pendulum would have had room to swing. He was, therefore, regretfully compelled to lay away the work uncompleted.

Another invention was a large thermometer with a dial on which the expansion and contraction of an iron rod, multiplied about thirty-two thousand times by a series of levers, was indicated by means of a hand operating

against a counter-weight. So sensitive was it to variations of temperature that in cold weather the dial hand would move upon the approach of a person. This instrument was regarded as a great wonder by all the neighbors and extant letters show that a Mr. Varnel was seriously thinking of acquiring the right to manufacture it commercially.

While all the world now knows John Muir as a naturalist, his gifts and capacities in that sphere were as yet unrevealed and unrecognized. It was his skill and ingenuity as an inventor that focused the eyes and the interest of his rural friends upon him. They encouraged him to think that he would have no difficulty in securing employment in some machine shop, especially if he took some of his inventions to the Wisconsin State Agricultural Fair. The suggestion appealed to him, and when the Fair was convened in Madison, in the autumn of 1860, he reluctantly prepared to leave the parental roof. The diffident, bashful, home-loving youth, who now stood hesitatingly at the opening of a fateful new chapter of his life, bears little resemblance to the dauntless explorer and world traveler which he was ultimately destined to become.

CHAPTER III

AS A QUESTIONER AT THE TREE OF KNOWLEDGE

When John Muir left home in September, 1860, the political outlook of the country was far from hopeful. The speeches and debates of Lincoln and Douglas had made clear to the average citizen that some decisive action must soon be taken with respect to slavery; that, as Lincoln had said in 1858, "either the opponents of slavery will arrest the further spread of it, and place it where the public mind shall rest in the belief that it is in course of ultimate extinction; or its advocates will push it forward, till it shall become alike lawful in all the States, old as well as new — North as well as South." In May, 1860, Lincoln was nominated for the Presidency by the Republican National Convention assembled in Chicago, and was elected by an overwhelming popular vote the following November. A few weeks earlier Governor W. H. Gist of South Carolina had written a letter to each of the cotton States inviting their co-operation in case South Carolina should resolve to secede. The replies were favorable, and before Lincoln was inaugurated in March, 1861, at

least seven Southern States had adopted ordinances of secession.

Such were conditions in the world beyond Hickory Hill farm when John Muir went forth with scrip and purse to find his fortune. His purse contained nothing but Grandfather Gilrye's farewell gift of a gold sovereign and a few dollars which he had earned by raising grain on a patch of abandoned ground. His scrip was the strangest with which a lad ever went forth from the parental roof — two large clocks whittled out of wood, and a thermometer made out of an old washboard, all tied together in a bundle for convenient transportation on his back. His brother David drove him to Pardeeville, a place he had never seen, though only nine miles distant from his home, and left him with his queer bundle on the station platform. For an account of the sensation which he immediately created with it in the little country town, and afterwards on the train and in Madison, the reader is referred to the vivid closing chapter of "My Boyhood and Youth."

Experience promptly disproved his father's prediction that once out in the world he would soon meet with severer taskmasters than he had known in the person of his father. On the contrary, he met with marked kindness wherever he went, a fact which warrants the inference

that he possessed engaging personal qualities. As his friends had anticipated, the originality and novelty of Muir's inventions immediately opened all doors for him at the fair of the State Agricultural Society in Madison. Three days before it opened a local newspaper, under the caption of "An Ingenious Whittler," commented on his clocks and predicted that few articles in the exhibit would attract as much attention as these products of Mr. Muir's ingenuity.

During the preceding year the Society had held its meeting and fair at Milwaukee and Lincoln delivered on this occasion an address in which he set forth his conception of industrial education among a free people. In the phrase "free labor" he embodied his idea of contrast with the time when educated people did not value manual skill because they scorned to perform manual labor, regarding it as the lot of the uneducated. This divorce between education and creative toil, he maintained, cannot be approved in a democracy. Curiously enough the Scotch lad who the following year was to come under the notice of the same Agricultural Society through products of his manual skill might almost have stood as a concrete illustration of the following passage in Lincoln's address. "Free labor," he said, "argues that as

the Author of man makes every individual with one head and one pair of hands, it was probably intended that heads and hands should coöperate as friends, and that that particular head should direct and control that pair of hands. As each man has one mouth to be fed and one pair of hands to furnish food, it was probably intended that that particular pair of hands should feed that particular mouth, that each head is the natural guardian, director and protector of the hands and mouth inseparably connected with it: and that being so, every head should be cultivated and improved by whatever will add to its capacity for performing its charge. In one word, free labor insists on universal education."

John had found a novel way of making his hands serve his head educationally and *vice versa*. His exhibition of the educational use to which he had been accustomed to put his clocks by harnessing them to his bed brought him the acquaintanceship of Mrs. Jeanne C. Carr, wife of Professor Ezra Slocum Carr, then Professor of Natural Science and of Chemistry at the University of Wisconsin. She was a native of Vermont, an uncommonly gifted woman, and passionately devoted to the study of plants. The Secretary of the State Agricultural Society, desiring to secure a premium for Muir's inven-

tions, asked Mrs. Carr to report them to the proper committee, since they were not easy to classify under the Society's specifications. She, therefore, accompanied the Secretary to a part of the grounds where John Muir was engaged in exhibiting a practicable coöperative relation between brains and beds. An improvised bedstead, covered with a few blankets, was mysteriously connected with a home-made wooden clock. The latter, when set for a desired rising time, would tilt up the bed and set the sleeper on his feet upon the footboard. To aid him in his demonstrations Muir had secured the enthusiastic assistance of two small boys, one of them the son of James Davie Butler, Professor of Greek in the University of Wisconsin, and the other a son of Mrs. Carr. The lads pretended to be asleep until the contrivance set them on their feet amid the cheers of the spectators who were attracted quite as much by the young inventor's artless and humorously enthusiastic explanations as by the novelty of the mechanism. When some time later Professor Carr reported at home Muir's attendance upon his lectures at the University the two lads, hoping for a course of jack-knife studies, eagerly invited their ingenious friend to their respective homes where he became a frequent and much appreciated guest.

The manner in which Muir became a student at the University of Wisconsin a few months after the close of the fair need not be retold here, since he has done it himself in his published memoirs. The intervening months were spent at Prairie du Chien whither he went at the invitation of a Mr. Wirad who offered him employment in his machine-shop. The opportunity proved a disappointment, though his intercourse with the Pelton family at the Mondell House, where he gave service for his board, became the starting-point of a lifelong friendship, not without profit to the art of letters as will appear later. In short, John was not to win success at a canter. This was impressed upon him even during the first exciting weeks in Madison. A youth whose father had refused to promise assistance in need, and whose paltry hoard of savings was soon spent, had need of all his wits. "A body has an extraordinary amount of longfaced sober scheming and thought to get butter and bread," he writes, in a nostalgic letter to his sister Sarah before the close of the Fair. "Practice economy in all that you do. . . See that all that you do is founded upon Scripture," was the response he got from his father — surely a futile admonition to a penniless, struggling, homesick lad a month after he has left home! "The folks think it funny that

you never date your letters, nor write your name at the end," complains his brother David, in allusion to a habit which John was long in outgrowing.

In January, 1861, his mother acknowledges a letter from Madison, expresses surprise that he has left Prairie du Chien, and desires to know what he wants to study. She is still further surprised when a month later she learns that he is "batching at the University." She hopes his health, which has not been good lately, will not suffer under the new mode of living. He is having a hard time and she thinks his father will assist him a little, but does not know when. Meanwhile he must not be discouraged but make the best of his circumstances. Two months later his father does send him ten dollars — with the admonition to be temperate, to love God more than making machines, and not to forget the poor destitute heathen! John, meanwhile, had no choice but to be temperate, for he occasionally had to cut his expenses for food to fifty cents a week. Daniel Muir's strangely perverted piety was equal to four "protracted meetings" a week and liberal gifts of money to vague and distant causes, while his own son was starving to obtain an education. "Let me know," he wrote, in sending the ten dollars, "when you are in great distress and I

will try what I can do." The paternal letters are affectionate in tone at the beginning and the end, but this does not disguise the singular and baffling stolidity with which he holds out to John a doubtful possibility of assistance when his troubles shall have assumed the proportions of really great distress. With religious exhortation he was liberal enough, for practically every letter, from the first line to the last, is a farrago of pious admonition.

When Muir came to the University of Wisconsin there was attached to the institution a preparatory department that served the purpose of a modern accredited high school. John began his studies in this department, but his proficiency and maturity were such that he was admitted to the Freshman class in a few weeks. After a summer of farm work at home he returned to Madison in the autumn of that year, occupying again his old room in North Hall. The expenses of tuition, books, and board, though extremely reasonable when judged by present standards, speedily reduced him to financial straits again, and he decided to earn some money by teaching a country school, a makeshift to which many students resorted, alternating their terms of study with terms of school-teaching. John, however, did not wish to interrupt his studies, so he arranged to carry

forward his University studies by night work during the spring term of 1862. A fellow student of the previous year, Harvey Reid, who had to discontinue his University work on account of similar difficulties, applauded his decision to teach. "Not only will it be of benefit to yourself," he wrote, "in giving you a thorough review of the common English branches, but the profession of teaching needs your kindness of heart, depth of principle, and courage in the right, to aid in making the youth of our country what a free people ought to be." The following letter exhibits him in his new rôle as teacher and "district school philosopher":

To Mr. and Mrs. David M. Galloway

[McKeeley's District, Oak Hall
Wisconsin, *February 9th*, 1862]

Dear Sarah and David:

I got your letter a good long while ago, but I have been so busy I have hardly known where I was. Mother wrote me that you were all pretty well. I am well as usual; the blessings attending district school-teaching do not seem to yield the injurious consequences which I had anticipated. The Monday morning that I commenced I did not know where to look, nor what to say, nor what to do, and I'm sure I looked bashful as any maid. A mud-turtle upside down

on a velvet sofa was as much at home. I heard a scholar declare that the teacher didn't seem to know bran, but all moves with regularity and ease now.

I couldn't get my clocks out with me at first, and, as I had not a watch, I set to work and made a clock to keep time until I had an opportunity of getting my other one from Madison. It cost about two hours' work and kept time by water passing in a fine jet through a three cent piece. I have a big wheel set on the wall which tells the different classes when and how long to recite, and a machine, too, for making me a fire in the morning at any hour I please, so that when I go to the old log schoolhouse these cold biting mornings, I find everything warmed and a good fire. I sometimes think of a "fixin'" to box the boys' ears, for at first the cry of "He don't half whip," came loud and angrily from all parts of my parish, and, indeed, I did think it an awful thing to skelp the little chaps, even though so many did give proofs in rich abundance at times of being mischief to the end of the toes. My voice would shake for hours after each hazel application. But now they cause precious little agitation or compunction of soul. My scholars, however, nearly all mean to behave themselves. They are neither good nor bad, certainly not such children as Pollock speaks of,

so good and guileless as to seem "made entire of beams of angels' eyes."

Sarah, how would you like to have a new home every five or six days? I often wish I could come home among you all a day or two, but, by the bye, you told Mrs. Parkins that you were coming down some day. I hope you will. The sleighing is good now. Ask for Oak Hall, which is about ten miles from Madison, south, then ask for McKeeley's district, or if you don't wish to come to school I will be in Madison any day you set. You had better come to school, though, and I will give you a lecture. I lecture every Saturday evening on Chemistry or Natural Philosophy, sometimes to sixty or seventy. You know it does not require much sapience to be a district school philosopher. Dave hasn't visited my school, nor I his. But I saw him once, and he said he was infinitely happy among his generous Dutch. He has singing schools, and sabbath schools, and writing schools. I hope Maggie and John are happy, and the wee body. May you all be always blest.

Good-bye.

JOHN MUIR

His term of school-teaching came to an end early in March and a sheaf of letters acknowl-

edging gifts and expressing affectionate appreciation of the training received survive to tell of the deep impression he made upon his pupils. He now devoted his entire time to his university work, improvised a chemical laboratory in his room in North Hall, and continued to indulge his inventive proclivities. Muir's room, in fact, speedily became a show place, a museum, to which both professors and students were accustomed to bring visitors, particularly on Saturdays and Sundays.

One delicate bit of mechanism that especially attracted the attention and admiration of Mrs. Carr was an apparatus for registering the growth of an ascending plant stem during each of the twenty-four hours. The plant he had selected for this purpose was a Madeira Vine (*Boussingaultia baselloides*) which was growing luxuriantly in his sunniest window. A fine needle threaded with the long hair of a woman fellow student made the record upon a paper disk divided into minute spaces with great exactness. One of his wooden clocks applied and controlled the motive power. An invention in lighter vein was what he called his "loafer's chair." It was a wooden chair with a split bottom over which an awkward crosspiece had been nailed in front, apparently to cure the split, but really to make the sitter spread his

knees. As soon as the supposed loafer settled down on the chair and leaned back, he pressed a concealed spring which fired a heavily charged old pistol directly under the seat. The leaps of the victims are said to have been worth seeing. These and other contrivances made John's room such a place of wonders to Pat the janitor that for decades afterwards he was accustomed to relate its marvels and point it out to newcomers.

In the autumn of 1916 the writer secured from surviving fellow students at the University of Wisconsin some personal impressions and recollections of John Muir as a student in Madison. Among those consulted were J. G. Taylor, Philip Stein, and Charles E. Vroman, and they all agreed in describing Muir as an extraordinary type of student. The account of Mr. Vroman, who became Muir's room-mate upon entering the University in the spring of 1862, is given as nearly as possible in his own words:

My acquaintance with John Muir began when a tutor, John D. Parkinson, took me in tow and led me to the northeast corner room of North Hall on the first floor. It was my first impression that the tutor was showing me a part of the college museum, for it was a strange-looking place to be the room of a college student. The room was lined with shelves, one above the other, higher than a man could reach. These shelves were filled with retorts, glass tubes, glass jars, botanical and geological speci-

mens, and small mechanical contrivances. On the floor around the sides of the room were a number of machines of larger size whose purposes were not apparent at a glance, but which I came to know later. A young man was busily engaged sawing boards and presently the tutor introduced him as John Muir. I was much younger than he and was entering the preparatory department, but it was the beginning of a close and delightful college friendship. When telling me stories of his early life, or reading Burns, he often dropped into a rich Scotch brogue, although he wrote and spoke English perfectly. The only books which I remember seeing him read were his Bible, the poems of Robert Burns, and his college textbooks. It was a very hard and dreary life which he had been compelled to live on his father's farm, but in spite of all he was the most cheerful, happy-hearted man I ever knew.

Muir boarded himself during his stay at the University, as did other students. His fare was very simple, consisting chiefly of bread and molasses, graham mush, and baked potatoes. Being on good terms with Pat, he had access to the wood furnaces in the basement where he could boil his mush on the coals and bake his potatoes in the hot ashes. For exercise he played wicket, walked, and swam. Muir's course of study, while irregular, corresponded closely to what was then called the modern classical. The last two years of his course were devoted to chemistry and geology. There were no laboratory facilities in the University at that time, so Muir built a chemical laboratory in his own room. He was by common consent regarded as the

most proficient chemical student in the college. In disposition Muir was gentle and loving — a high-minded Christian gentleman, clean in thought and action. While he was not a very regular attendant at church, he read his Bible regularly, said his morning and evening prayers each day, and led the kind of life which all this implies. He was, however, in no respect austere or lacking in humor, but bubbling over with fun, and a keen participant in frolics and college pranks, especially when Pat the janitor needed to be taken down.

The summer of 1862 Muir spent for the most part at the old Fountain Hill farm with his sister and brother-in-law. The following letter written after his return to Madison reflects the then prevailing uncertainty regarding the continuance of the University. It had no Chancellor at this time and was seriously short of funds. The affairs of the University were administered by the faculty under the chairmanship of Professor John W. Sterling, whose unselfish devotion and unquestioned ability entitled him, in the opinion of the most distinguished alumni, to be made Chancellor. But the strangely myopic regents of this period let him do the work of holding the University together from 1859 to 1867 without even the title of Vice-Chancellor and without extra salary.

On July 2, 1862, President Lincoln signed the Morrill Act, which marks one of the greatest

advances in the history of American education. By this Act each State was given for educational purposes thirty thousand acres of land for each of its Senators and Representatives in Congress. The conditions attached to the grant were easily fulfilled, but the authorities of the University of Wisconsin allowed four years to elapse before they effected the reorganization that entitled them to claim the benefit of the Act. Even the prospect of this aid, however, had a heartening effect upon the little group that kept the University alive in hope of better times.

Muir's letter is of interest, too, because it shows that he was training himself in the art of crayon sketching, an art in which he was later to gain great proficiency, and one that proved invaluable to him in the keeping of his exploration journals.

To Mr. and Mrs. David M. Galloway

MADISON, [AUTUMN,] 1862

DEAR BROTHER AND SISTER:

Perhaps you begin to think it long since I wrote last. After leaving the sheaves and thrashing machine, the merry sound of our old bell made me all crazy with joy. I think I love my studies more and more, and instead of the time for dismissing them coming nearer, as one term after

another passes, it seems to go farther and farther away.

We live in changing times, and our plans may easily be broken, but if not I shall be seeking knowledge for some years, here or elsewhere.

Our University has reached a crisis in its history, and if not passed successfully, the doors will be closed, when of course I should have to leave Madison for some institution which has not yet been wounded to the death by our war-demon.

If John Reid can spare me money I shall not teach this winter, for though it seems an easy way of making a hundred dollars every winter, yet the time for acquiring as much as I desire would in that way be too much prolonged. That money will likely be spent, as the Catholics say, for the benefit of my soul.

Those pictures are framed and I need not tell you that they are prized a good deal. Our tutor takes a great liking to the lake, and wishes it in his room. If more time could be spared for drawing I would send you a picture once or twice in a while, as I know you have a taste for them. . . .

This war seems farther from a close than ever. How strange that a country with so many schools and churches should be desolated by so unsightly a monster. "Leaves have their time

to fall," and though indeed there is a kind of melancholy present when they, withered and dead, are plucked from their places and made the sport of the gloomy autumn wind, yet we hardly deplore their fate, because there is nothing unnatural in it. They have done all that their Creator wished them to do, and they should not remain longer in their green vigor. But may the same be said of the slaughtered upon a battle field? If you might be successful you would go far to bring the millennium to get love into those leopards and lambs, would you not?

But good-bye, I wish God's blessing for yourselves and little ones. Come and see me if you can, as possibly I may have to go farther from home.

Give me a letter, each of you, soon.

JOHN MUIR

It was to be expected that a young man of Muir's sensitive nature and rigid religious training would find the Civil War an agonizing problem. Camp Randall, where about seventy thousand men were drilled and mobilized in the course of four years, was situated half a mile west of the University and within full view of the campus. Often he went there to look after the comfort of friends or to bid them farewell.

Fragments of an extensive correspondence show that he became a tender and solicitous religious adviser to numerous enlisted men who craved this service. Among them are former students of the University whose names, apparently, were lost from the alumni records. The fearful toll of life exacted by unsanitary conditions in the military camps weighed heavily upon his mind and probably had something to do with his long-cherished purpose to enter the profession of medicine.

One day in the spring of 1863 his fellow student, M. S. Griswold, accidentally detained him for a moment on the steps of North Hall with questions about a locust blossom that he picked from a branch overhead. It was a fateful moment for Muir. He professed to know nothing about botany, so Mr. Griswold proceeded to tell him about the family relationship of the locust tree, and before the conversation was ended, Muir had caught an entrancing vision of a science new to him. "This fine lesson," he wrote in his memoirs, "charmed me and sent me flying to the woods and meadows in wild enthusiasm. . . . I wandered away at every opportunity, making long excursions round the lakes, gathering specimens and keeping them fresh in a bucket in my room to study at night after my regular class tasks were learned; for

my eyes never closed on the plant glory I had seen." By such chance occurrences are the destinies of men determined. Had it not been for this new enthusiasm coming into his life he would undoubtedly have entered the medical profession. The following letter is the first to reflect the consequences of his new passion. The "somewhere much farther away" refers to incipient plans to enter the Medical School of the University of Michigan.

To Mr. and Mrs. David M. Galloway

[Madison] *June 1st*, 1863

Dear Sarah and David:

Unless hindered by circumstances not seen now, I shall be at Watson's Thursday, [June] 18th. I am sorry that you have not been able to visit me, as I will not return to Madison, but will go somewhere much farther away, so that you will not be so able to reach me, as now.

I cannot do anything toward analyzing your plant, Sarah, without the flower. I mean to be happy for a few days around Fountain Lake in collecting specimens for my herbarium. I returned last Saturday evening from a long ramble of twenty-five miles through marshes, mud, and brushwood with a heavy basketful of flowers, weeds, moss and bush-twigs, having made five or six visits besides, and pressed

thirty specimens or more. So you need not cry over my sober face. I am not so feeble, you see.

You would like the study of Botany. It is the most exciting thing in the form of even amusement, much more of study, that I ever knew. Very unlike the grave tangled Greek and Latin — but I will see you soon. Good-bye.

Affectionately yours

J. Muir

I had almost forgotten, Sarah, to tell you that I was elected judge in one of the debating clubs a short time ago, also President of the Young Men's Christian Association. You say that you expect something great by and by! Am not I great now?

Within a week he withdrew the appointment to be met at Watson's, saying that he was going on a long botanical and geological tour down the Wisconsin River valley and into Iowa. "I am not so well as I was last term," he writes. "I need a rest. Perhaps my tour will do me good, though a three or four hundred mile walk with a load is not, at least in appearance, much of a rest." He went with two companions and an account of the excursion was subsequently communicated to Miss Emily Pelton, then of Prairie du Chien, in a series of letters predated

as if they had been written "during the ramble," but actually written six months later, just before he went on a botanical tour into Canada.

To Miss Emily Pelton

FOUNTAIN LAKE, *February 27th*, 1864

DEAR FRIEND EMILY:

You speak in your last letter of the pleasure which a letter written during the ramble would have given, but it is not yet too late.

"Backward, turn backward, O Time, in your flight!"

RECESS IN THE BLUFFS NEAR MCGREGOR, [IOWA]
July 7th, 1863

DEAR FRIEND EMILY:

This evening finds us encamped near McGregor. We have spent a toilsome day, but it has not been without interest. In the morning we were directed to a romantic glen down which a little stream sought a path, turning the mosses to stone as it went, and watering many interesting flowers. "The road that leads to it," said the man, "lies close along the river brink. It is not very far and a log house marks the glen's narrow entrance." We remarked that in following our directions, when we had inquired more particularly about the exact position of the log house after we had proceeded some distance on our way, the person we inquired of gave us

some very curious glances which we could not understand. As we proceeded on our way we could not withstand the temptation to climb the bluffs that beetled so majestically overhead, and after many vain attempts we at last found a place where the ascent was practicable. We had to make many a halt for rest, and made as much use of our hands as of our feet, but the splendid view well repaid the toil.

After enjoying the delightful scenery and analyzing some specimens which we gathered on our way, we began to wish ourselves down again, as the afternoon was wearing away and we wished to visit the glen before night, but descending was still more difficult, and we several times reached an almost unstoppable velocity. We found the first specimen of Desmodium in this vicinity and several beautiful Labiatae.

After traveling a good way down the river we began to fear that we had already passed the object of our search, but, when the sun's rays were nearly level and we had just emerged from a mass of low leafy trees, we were suddenly struck with the most genuine astonishment at the unique and unexpected sight so full before us. We expected that a log house in such a place would be a faultless specimen of those pioneer establishments with outside chimney,

the single window, and door overrun with hop vines or wild honeysuckle, the dooryard alive with poultry and pigs, and the barnyard at hand with its old straw-stack and street of dilapidated stables and sheds, with cows, dirty children, and broken plows sprinkled over all.

But judge, Emily, of our surprise when, upon a piece of ground where the bluffs had curved backward a little from the river, we at once saw the ruinous old house with four gaudily dressed females in an even row in front, with two idle men seated a little to one side looking complacently upon them like a successful merchant upon a stock of newly arrived goods. Not a broken fence, dirty boy, or squealing pig was to be seen, but there on such a background — the old decaying logs and the dark majestic hills on which the soft shades of evening were beginning to fall — there, in clothes which had been dipped many times in most glaring dyes, sat the strange four. It was long before I could judge of the character of the establishment, but I saw at once there was something very strange about it, and instinctively fell behind my companion. He was equally ignorant, but boldly marched forward and asked for the glen where fossils were found. This was a subject of which they knew but little. They told us that the path went no further, that the hills were un-

climbable, etc. We then took the alarm, gained the summit of the bluffs after an hour's hard labor, built our campfire, congratulated each other on our escape, and spoke much from the first chapter of Proverbs.

You will perhaps soon hear from us again.

Truly your friend

J. M.

To Miss Emily Pelton

[Camp below the Junction of the Wisconsin with the Mississippi, *July* 8, 1863]

Dear Friend Emily:

When morning had dawned after our evening log house adventure, we found ourselves upon the brink of one of the highest points overhanging the river. It seemed as though we might almost leap across it. The sun was unclouded, and shone with fine effect upon the fleecy sea of fog contained by its ample banks of bluffs. Later it flowed smoothly away as we gazed and gave us the noble Mississippi in full view.

Breaking the spell which bound us here so long, we leisurely proceeded to explore the pretty glen which we had passed before in the dark. Here we spent some hours of great interest and added some fine plants and fossils to our growing wealth, and soon found ourselves upon

the shore of the great river. The genuine calm of a July morning was now master of all. The river flowed on, smooth as a woodland lake, reflecting the full beams of the dreamy light, while not on all the dark foliage which feathered its mountain wall moved a single breeze. We stood harnessed and half asleep with the settled calm, looking wishfully upon the cool waters, when suddenly the thought struck us, "How fine it would be to purchase a boat and sail merrily up the Wisconsin to Portage." We would read and work the oars by turn as our heavy packs would be stowed snugly away beneath the seats, and every few miles we would land at an inviting place and gather new spoils. And so in a few minutes we had our effects packed snugly, as I have described, in a pretty boat, and were joyfully floating on the bosom of the Father of Waters.

But, alas, how vain our large hopes of promised bliss! We reached the mouth of the Wisconsin River and soon our bright faces grow less and less bright till gloomy as a winter's day, as we paddle with all our might, shooting bravely on against the current at the fearful velocity of *ten rods per two hours*. At last, completely exhausted, we give up, for a moment, in despair and are instantly returned to the Mississippi by the boiling current. But we were

not yet beaten, for holding a council of war against the bustling stream, we determined to "Try, try again."

So, landing, we procured a pair of boards, by the necessitous act of self-appropriation, and proceeded to make two pair of oars. They were nearly made before dark. We found a new camping ground and sought repose with hearts again trimmed with fresh hope. . . .

I shall write you again and give you the result of to-day's labor. I wish you would write immediately on receiving this. Address Wauzeka [Wisconsin.] I shall pass near that place in a few days.

Truly your friend
J. Muir

To Miss Emily Pelton

Farm House near Wright's Ferry,
July 9th, 1863

Dear Friend Emily:
We started, in good spirits again, this morning, with our long oars manufactured by our hatchet. We applied them to our little boat and soon were again at the mouth of the Wisconsin which came tumbling down rapid and restless as ever. At each pull of the oars our little fairy almost leaps from the water, but we were now in the very midst of the boiling waters. We

shoot now to this side, now to that, making very acute angles, and almost capsizing several times. Again we pull harder than ever — again are baffled. We are drenched thoroughly with streaming sweat, but we have strength remaining and have already conquered fifteen or twenty rods. The combat is prolonged amid splashing and boiling, now drifting back, now gaining a few rods, now fast on a sand-bar on this side, now aground on the other, till the victory was again wrenched from us, and, drawing our boat up on a large sand bank we disembarked, laid our packs at our feet, and with uncovered heads, thus addressed the culprit boat, each in turn:

"O Boat, heretic and perverse, why persist in this obstinate and unprofitable determination of opposition to the reasonable demands of thy lords and masters? . . . Shame be thy portion! Thou art small and light as a baby's cradle, but obstinate and unsteerable as Noah's ark. . . . Depart from my service to that of another upon thy parent whom thou seemest to love, and may'st thou serve her better than thou hast served me."

This said, a card was nailed upon a conspicuous place and directed to Mrs. Goodrich,[1]

[1] Note by Mrs. Emily Pelton Wilson: "A friend he met at our house in Prairie du Chien."

Dubuque, Iowa, and two three cent stamps placed on it as it was overweight. Then pushing it into the current we watched it a few minutes as it sailed away, now appearing and now lost, as it passed the willows upon the bank. Then we again placed our old companion packs, and soberly marched away with unequal steps through the tall grass, like good Æneas with his Penates when cast upon Queen Dido's coast.

After a very wearisome walk over wet places and fallen trees we reached the house where I now write. We did not intend to stop here, but only called for our fifth meal, as we had but one yesterday, and we wished to make a fair average. But the old lady of the mansion gave us so good a welcome that we entered and she made us supper. She has invited us to stay all night. She, we had observed from the first, was possessed of a lasting fund of everyday benevolence, and just a few minutes ago she told us her reason. "I have," she said, "a son who was some years in New Mexico. Many times he was refused shelter from storm and compelled to pass long nights in rain and sleet. I was determined that *though I should be occasionally imposed upon* I should never refuse the rites of hospitality *to any*." This, I think, is as noble a sentiment as ever came from mortal lips, and if

I live, she shall know some time that I have not forgotten her. My companion, as I write, is listening to the narration of this son's adventures. This is the only place where we have met with a really cordial reception.

Good-bye. You may hear from me again when I reach a convenient point. Write soon.

[JOHN MUIR]

Apparently the trio of young naturalists had difficulty in finding the wherewithal to satisfy their healthy outdoor appetites. The following narrative poem, which accompanied the foregoing letters to Miss Pelton, describes the difficulties they encountered while searching for a breakfast:

IN SEARCH OF A BREAKFAST

Dedicated to the

"Patron of all those luckless brains,
Which to the wrong side leaning,
Indite much metre with much pains
And little or no meaning."

The early breeze of morning falls
Upon the trembling chamber walls,
The hours of evening, one by one,
Retreat before the joyful sun.
Our heroes' task of resting o'er,
They leave their ever-open door
And yawn, and stretch, and view the sky
With looks and garments much awry;

Then seek, with faltering steps and slow
The bustling stream that winds below,
Where, like wet poultry after rain,
That trim disordered plumes again,
They wash, and lave, and dress their hair,
And for the breakfast search prepare.

All harnessed now, in rambling style,
With bounding glee they march a while;
The gen'rous grass and twigs bestow
Their dewy honors as they go,
Till we might deem the stranger three
All night had drifted in the sea.
Minutely now each sheltered shade,
Soft sedgy pool and waving glade,
Is searched throughout with patient eye,
If stranger plant they might descry.
If such be found, no golden treasure
May bring so much of honest pleasure.
But smoke curls on that mountain brow,
And breakfast is the question now.

The house is gained — with air half bold
Their tale of morning hunger's told;
They ask no bun of prickly taste,
No pie complex with frosty paste,
No fiery mixture striped with candy,
No slimy oysters boiled in brandy,
But bread and milk, at any time
Purchased with a paper dime.
But ah! How marred was breakfast then.
How lost the plans of "mice and men"!
For bread — "I've none," good mother cries,
"Because my risings did not rise.
"I've biscuit, but a pair at most,
"And as for milk, the cow is lost.
"But, three miles farther on your way
"You'll come to Dick and Simon Day."

With tardy steps they leave the door
And more a hungered than before,
And slow, the lengthened miles they tread
Which lead to Simon's timber shed.
With growing emphasis they tell
How 'neath a cotton sheet they dwell,
And 'mid the hills all daylight hours
Roam near and far for weeds and flowers.
But growling want still pressing sore
Compels to seek the farmer's door,
And add with deeply serious brow,
How much they feel of hunger now.

But Simon has no bread to spare,
The milk is soured by sultry air.
But Jacob Wise at Fountain well
"Has heaps of cows, and milk to sell."
Then from a fallen log they rise
And gravely steer for Farmer Wise.
Meanwhile the day of sultry June
Approaches fast the hour of noon.
Our heroes, faint and fainter still,
Toil on with braced unfaltering will,
Till on a ridge of thistly ground
The home of Master Wise is found,
And, waxing bold, our starving men
Bestow their tale of want again.
But Jacob with commanding air
Presents on each a Yankee stare,
And slowly, in dull angry tone,
Assures them they "had best be gone."

But stanchly fixed with needful will,
Till fed with milk and bread their fill,
And, wiser grown, they know their task
And kindly divers questions ask: —
How long beside this darkened wood
His house and handsome barn have stood?

How old himself and curly dog?
How much had weighed his fattest hog?
How great the price of meadow hay?
How far from here his clearing lay?
These chords so struck resounding well,
With kindling eye he'll warely tell
How first this woodland farm he found
When all was Indian hunting ground.
And coons and herds of fallow deer
Were tame as sheep or broken steer,
And howling wolf and savage yell
Mixed all the echoes up the dell.

Thus poulticed he, inflamed before,
Is calm as Boss, and all her store
Uncreamed, with bread and Sally's pie,
Bestows with kindly beaming eye.
"Nor aught," said he, "will I deny
To honest folks as good as I;
But strolling men of wiley looks,
A peddlin' clothes and dirty books,
Howe'er so larned or big they be
Much comfort ne'er shall get from me."

The following letter, bearing no indication of place or date, probably was written toward the end of July, 1863, shortly before he left Madison to assist his brother-in-law in harvest work on the Fountain Lake farm. If so, it describes, perhaps, the last botanical excursion he made from Madison.

To Mr. and Mrs. David M. Galloway

[Madison, *July*, 1863]

Since writing last we have been on many a

hill, and walked "o'er *moors* and mosses many o," but the best of all our rambles was one which was completed last Friday. We took the train from here Thursday morning for Kilbourn, a small town on the Wisconsin River towards LaCrosse, rambled all day among the glorious tangled valleys and lofty perpendicular rocks of the famous Dells, stayed over night in Kilbourn, and voyaged to Portage next day upon a raft of our own construction. The thousandth part of what we enjoyed was pleasure beyond telling. At the Dells the river is squeezed between lofty frowning sandstone rocks. The invincible Wisconsin has been fighting for ages for a free passage to the Mississippi, and only this crooked and narrow slit has been granted or gained.

At present all is peace, but the river, though calm, does not appear contented. Only a few foam-bells are seen, but they float with an air of tardy settled sullenness past the black yawning fissures and beetling, threatening rock-brows above. But when winter with its locking ice has yielded to the authoritative looks of the high summer sun, just at the darkest of the year before any flowers are overhead or any of the rock ferns have unrolled their precious bundles, then the war is renewed with the most terrific, roaring, foam-

ing, gnashing fury. Fierce legions come pouring in from many an upland swamp and lake, in irresistible haste, through broken gorge and valley gateways. All in one they rush to battle clad in foam — rise high upon their ever-resisting enemy, and with constant victory year by year gain themselves a wider and straighter way.

Kilbourn station is about two miles below the Dells. We went to the river-side and at once began to find new plants. The banks are rocky and romantic for many miles both above and below the Dells. On going up the river we were delightfully opposed and threatened by a great many semi-gorge ravines running at right angles to the river, too steep to cross at every point and much too long to be avoided if to wish to avoid them were possible. Those ravines are the most perfect, the most heavenly plant conservatories I ever saw. Thousands of happy flowers are there, but ferns and mosses are the favored ones. No human language will ever describe them. We traveled two miles in eight hours, and such scenery, such sweating, scrambling, climbing, and happy hunting and happy finding of dear plant beings we never before enjoyed.

The last ravine we encountered was the most beautiful and deepest and longest and

narrowest. The rocks overhang and bear a perfect selection of trees which hold themselves towards one another from side to side with inimitable grace, forming a flower-veil of indescribable beauty. The light is measured and mellowed. For every flower springs, too, and pools, are there in their places to moisten them. The walls are fringed and painted most divinely with the bright green polypodium and asplenium and mosses and liverworts with gray lichens, and here and there a clump of flowers and little bushes. The floor was barred and banded and sheltered by bossy, shining, moss-clad logs cast in as needed from above. Over all and above all and in all the glorious ferns, tall, perfect, godlike, and here and there amid their fronds a long cylindrical spike of the grand fringed purple orchis.

But who can describe a greenhouse planned and made and planted and tended by the Great Creator himself. Mrs. Davis wished a fernery. Tell her I wish she could see this one and this rock-work. We cannot remove such places to our homes, but they cut themselves keenly into our memories and remain pictured in us forever.

[JOHN MUIR]

Muir had lingered in Madison after the close

of the University session, partly to botanize amid its lovely natural surroundings, partly because of his attachment for the place where his eyes had been opened to a greater world of knowledge and of beauty. But the time of departure finally came. "From the top of a hill on the north side of Lake Mendota," he writes in the closing paragraph of "My Boyhood and Youth," "I gained a last wistful, lingering view of the beautiful University grounds and buildings where I had spent so many hungry and happy and hopeful days. There with streaming eyes I bade my blessed Alma Mater farewell. But I was only leaving one University for another, the Wisconsin University for the University of the Wilderness."

CHAPTER IV

THE SOJOURN IN CANADA

1864–1866

When John Muir left the University of Wisconsin in June, 1863, he had fully resolved to begin the study of medicine at Ann Arbor. There are a number of warmly worded letters of introduction from Madison friends who wished to smooth his way at the University of Michigan. "You will find in him the greatest modesty joined with high moral and religious excellence," wrote one of them to James R. Boise, then Professor of Greek in the latter institution. How far these plans for the definite choice of a profession had progressed is apparent also in the fact that friends addressed letters to him at the Medical School and evinced surprise when they were returned unclaimed. "A draft was being made," he wrote in explanation to one of them, "just when I should have been starting for Ann Arbor, which kept me at home."

Meanwhile his fellow student, James L. High, later a distinguished lawyer in Chicago, wound up his affairs at Madison and made a

report in November. "Our class," he wrote, "numbers only five, viz., Wallace, Spooner, Salisbury, Congar, and myself. Leahey has gone into the army, and Lewis is a senior at Union College, New York. So, as you see, we are small in numbers, but we are making a brave fight of it nevertheless. The Societies are doing unusually well this term. Yours numbers about twenty-five members, and ours over forty." Then follows an account of his efforts to collect small loans which Muir had made to fellow students. The society referred to as "yours" was the Athenæ Literary and Debating Society of which he was one of the founders.

Returning from his botanical rambles in July, John spent the autumn and winter on the old Fountain Lake farm which, some time in 1856, had passed into the hands of his brother-in-law, David Galloway. "With study and labor I have scarcely been at all sensible of the flight of time since I reached home," he writes at the end of February to his friend Emily Pelton. "In my walks to and from my field work and in occasional rambles I, of course, searched every inch of ground for botanical specimens which, preserved in water, were analyzed at night. My task was seldom completed before twelve or one o'clock. I was just

thinking to-day that soon the little anemones would be peering above ground."

But even at this time, when the new sap was barely beginning to swell the buds, the young naturalist was pluming his wings for a long flight. "I have enjoyed the company of my dear relatives very much during this long visit," he adds, "but I shall soon leave them all, and I scarcely think it probable that I shall be blest with so much of home again." As for the study of medicine, he merely remarks that he had "by no means given up all hope of still finding an opportunity to pursue this favorite study some other time." But that time never came. Two days later, on March 1, 1864, he announces, in a parting note to the same friend, "I am to take the cars in about half an hour. I really do not know where I shall halt. I feel like Milton's Adam and Eve — 'The world was all before them where to choose their place of rest.'"

It would be impossible now to trace any part of the intricate route which finally led him to Meaford, County Grey, Canada West, were it not for one of those fortunate incidents which sometimes occur to gladden the heart of a biographer. In editing Muir's journal and notes written during his "Thousand-Mile Walk to the Gulf" the writer began to realize

how much easier it would be, at critical points, to follow his wanderings if one had his herbarium specimens with the identification slips, giving date and place of collection. But no part of the herbarium gathered during the sixties seemed to have survived the wanderings of this modern Ulysses.

In looking over some correspondence with Mrs. Julia Merrill Moores, one of his early Indianapolis friends, the writer found reason to suppose that Muir had left for safekeeping at her house some of his belongings when he went South in 1867. Though she had passed on long ago the clue seemed worth following, and a search in Indianapolis proved successful beyond all expectations. For the attic of her son, Charles W. Moores, yielded up large parts of the long forgotten herbarium which Muir had gathered during the years from 1864 to 1867.

Since no letters or notebooks of Muir from the period between March and October, 1864, have been found, the little identification slips, though not precise in giving geographical localities, furnish important clues to his movements. In April he was already wading about in Canadian swamps, and by the month of May he had penetrated northward as far as Simcoe County. On the 18th of that month he started on a three weeks' ramble through Simcoe

and Grey Counties, walking an estimated distance of about three hundred miles through the townships of Guillimbury, Tecumseh, Adjala, Mono, Amaranth, Luther, Arthur, Egremont, Proton, Glenelg, Bentinck, Sullivan, Holland, and Sydenham. "Much of Adjala and Mono," he notes, "is very uneven and somewhat sandy; many fields here are composed of abrupt gravel hillocks; inhabitants are nearly all Irish. Amaranth, Luther, and Arthur abound in extensive Tamarac and Cedar swamps, dotted with beaver meadows. I spent seven and a half hours in one of these solitudes extraordinary. Land and water, life and death, beauty and deformity, seemed here to have disputed empire and all shared equally at last. I shall not soon forget the chaos of fallen trees in all stages of decay and the tangled branches of the white cedars through which I had to force my way; nor the feeling with which I observed the sun wheeling to the West while yet above, beneath, and around all was silence and the seemingly endless harvest of swamp. Above all I will not soon forget the kindness shown me by an Irish lady on my emerging from this shadow of death near her dwelling."

Of memoranda made on this ramble there survives only the following additional note:

It was with no little difficulty that my object in seeking "these wilds traversed by few" was explained to the sturdy and hospitable lairds of these remote districts. "Botany" was a term they had not heard before in use. What did it mean? If told that I was collecting plants, they would desire to know whether it was cabbage plants that I sought, and if so, how could I find cabbage plants in the bush? Others took me for a government official of some kind, or minister, or peddler.

One day an interesting human discovery is made and recorded thus: "Found Dunbar people, much to my surprise, far in the dark maple woods; spent a pleasant day with them in rehearsing Dunbar matters."

During July he was botanizing north of Toronto in the Holland River swamps, and on highlands near Hamilton and Burlington bays. In August he is again about the shores of Lake Ontario and in the vicinity of Niagara Falls. A "wolf forest," mentioned on several slips, is doubtless the place on the southern shore of Lake Ontario where one night he had an adventure with wolves. That as well as other incidents form the subject of the following fragmentary autobiographical sketch which fortunately covers this period of Canadian wanderings in some detail:

After earning a few dollars working on my brother-in-law's farm near Portage, I set off on the

first of my long lonely excursions, botanizing in glorious freedom around the Great Lakes and wandering through innumerable tamarac and arbor-vitæ swamps, and forests of maple, basswood, ash, elm, balsam, fir, pine, spruce, hemlock, rejoicing in their boundless wealth and strength and beauty, climbing the trees, reveling in their flowers and fruit like bees in beds of goldenrods, glorying in the fresh cool beauty and charm of the bog and meadow heathworts, grasses, carices, ferns, mosses, liverworts displayed in boundless profusion.

The rarest and most beautiful of the flowering plants I discovered on this first grand excursion was *Calypso borealis* (the Hider of the North). I had been fording streams more and more difficult to cross and wading bogs and swamps that seemed more and more extensive and more difficult to force one's way through. Entering one of these great tamarac and arbor-vitæ swamps one morning, holding a general though very crooked course by compass, struggling through tangled drooping branches and over and under broad heaps of fallen trees, I began to fear that I would not be able to reach dry ground before dark, and therefore would have to pass the night in the swamp and began, faint and hungry, to plan a nest of branches on one of the largest trees or windfalls like a monkey's nest, or eagle's, or Indian's in the flooded forests of the Orinoco described by Humboldt.

But when the sun was getting low and everything seemed most bewildering and discouraging, I found beautiful Calypso on the mossy bank of a stream, growing not in the ground but on a bed of yellow

mosses in which its small white bulb had found a soft nest and from which its one leaf and one flower sprung. The flower was white and made the impression of the utmost simple purity like a snowflower. No other bloom was near it, for the bog a short distance below the surface was still frozen, and the water was ice cold. It seemed the most spiritual of all the flower people I had ever met. I sat down beside it and fairly cried for joy.

It seems wonderful that so frail and lowly a plant has such power over human hearts. This Calypso meeting happened some forty-five years ago, and it was more memorable and impressive than any of my meetings with human beings excepting, perhaps, Emerson and one or two others. When I was leaving the University, Professor J. D. Butler said, "John, I would like to know what becomes of you, and I wish you would write me, say once a year, so I may keep you in sight." I wrote to the Professor, telling him about this meeting with Calypso, and he sent the letter to an Eastern newspaper [1] with some comments of his own. These, as far as I know, were the first of my words that appeared in print.

How long I sat beside Calypso I don't know. Hunger and weariness vanished, and only after the sun was low in the west I plashed on through the swamp, strong and exhilarated as if never more to feel any mortal care. At length I saw maple woods on a hill and found a log house. I was gladly received. "Where ha ye come fra? The swamp, that awfu' swamp. What were ye doin' there?" etc. "Mony a puir body has been lost in that muckle, cauld, dreary bog and never been found." When I

[1] The *Boston Recorder.*

told her I had entered it in search of plants and had been in it all day, she wondered how plants could draw me to these awful places, and said, "It's God's mercy ye ever got out."

Oftentimes I had to sleep without blankets, and sometimes without supper, but usually I had no great difficulty in finding a loaf of bread here and there at the houses of the farmer settlers in the widely scattered clearings. With one of these large backwoods loaves I was able to wander many a long wild fertile mile in the forests and bogs, free as the winds, gathering plants, and glorying in God's abounding inexhaustible spiritual beauty bread. Storms, thunderclouds, winds in the woods — were welcomed as friends.

Only once in these long Canada wanderings was the deep peace of the wilderness savagely broken. It happened in the maple woods about midnight when I was cold and my fire was low. I was awakened by the awfully dismal wolf-howling and got up in haste to replenish the fire. Some of the wolves around me seemed very near, judging by their long-drawn-out howling, while others were replying farther and farther away; but the nearest of all was much nearer than I was aware of, for when I had succeeded in producing a blaze that lighted up the bushes around me, and was in the act of stooping to pick up a branch to add to the blaze, a large gray wolf that had been standing within less than ten feet of me rushed past so startlingly near that I threw the limb at the wolf. This put an end to sleep for that night. I watched and listened and kept up a good far-reaching blaze, which perhaps helped to keep them at bay. Anyhow I saw no more of them,

although they continued their howling conversation until near daylight.

I had to stop again and again in all sorts of places when money gave out, accepting work of any kind and at any price, and with a few hard-earned dollars, earned at chopping, clearing, grading, harvesting, going on and on again, thus coming in contact with the people and learning something of their lives.

Among the farmers in the region between Toronto and the Georgian Bay I found not a single American. They were Scotch, English, and Irish, mostly Scotch. Many of them were Highlanders who had been driven from their little farms and garden patches in the glens by the Duke of Sutherland when he cleared his estates of these brave home-loving men to make room for sheep. Most of the old folks, by the time of my visit, had gone to rest in their graves, and the farms they had so laboriously cleared were in the possession of their children, who were living in good brick houses in comparative affluence and ease.

At one of those Highland Scotch farms I stopped for more than a month, working and botanizing. The family consisted of the mother, her daughter, and two sons. Here I had a fine interesting time. Mrs. Campbell could hardly have been kinder had I been her own son, and her two big boys,[1] twenty

[1] In a marginal note Muir gives their names as "Alexander and William," with a question sign. In the letter of a correspondent, marked "W. E. Sibley of early Canada botanical days," occurs the following sentence: "I saw D. and A. Campbell and was at their house. They were all quite well and said they intended writing to you." (February 28, 1865.)

and twenty-five years of age, were also very kind and fonder of practical jokes than almost anybody I ever met. In the long summer days I used to get up about daylight and take a walk among the interesting plants of a broad marsh through which the Holland River flows. I had not been feeling very well and motherly Mrs. Campbell was somewhat anxious about my health. One morning the boys, finding my bed empty and knowing that I must have gone botanizing in the Holland River swamp, and knowing also the anxiety of their mother about my health, put a large bag of carpet rags, that was kept in the garret, in my bed and pulled the blankets over it. When Mrs. Campbell met the boys before breakfast and inquired for John, they with solemn looks replied that "Botany," as they called me, was sick. When she anxiously inquired what ailed me they said they didn't know because they could not get me to speak; they had tried again and again to arouse me but I just lay still without saying a word as if I were dead, though I seemed to be breathing naturally enough. Mrs. Campbell, greatly alarmed, first called me from the foot of the stairs, and, getting no reply, walked half way up and again called, "John, John, will you not speak to me?" The continued dead silence corresponded with the boys' cunning story and made her doubly anxious, so she climbed to the bed and shook as she supposed my shoulder, saying, "John, John, will you not speak?" Finally, pulling down the cover, she cried in glad relief, "Oh, those boys again, those boys again!"

Soldiers from the British army occasionally deserted and hid in the woods and swamps. For a

certain deserter a considerable reward was offered and the Campbell boys told the officers that they had seen a suspicious character creeping out of the woods and swamps of the Holland River early in the morning, and that they thought he must be getting food from the neighbors and hiding in the swamp. A watch was, therefore, set and when they captured me I had some difficulty in explaining that I was only a botanist.

Here is another of the practical jokes of these irrepressible Highlanders: on frosty moonlight nights in winter when the sleighing was good, many of the young men from the neighboring village of Bradford took their girls out sleigh-riding. The Campbell boys dressed themselves in white bed sheets and, just before the sleigh-riding began at dusk, they climbed to the roof of a schoolhouse which stood at the crossroads, a mile or so from their farm, and commenced vigorously trying to saw off the chimney with a fence rail. Their reward was in hearing the boys and girls scream and rush back to the village. The people in that neighborhood were devoted believers in good old-fashioned ghosts.

These boys were capital story-tellers. One of their neighbors had a nose thus described by the elder of the two, "Mr. So-and-so has a big nose. Oh! a very big nose! So big and heavy that it shakes when he walks; and his shaking nose shakes his whole body, and makes the ground shake, and you would think there was an earthquake!"

Farther west were large wooded areas, still perfectly wild, on the edges of which homeseekers were laboriously plying their heavy axes, making clear-

ings for fields. At first only a few acres would be slashed down — oak, ash, elm, basswood, maple, etc., of several species. On account of the closeness of the growth these trees were tall and comparatively slender, and the roots formed a net-work that covered the ground so closely that not a single spot was to be found in which a post-hole could be dug without striking roots. These beautiful trees were simply slashed down, falling upon each other and covering the ground many trees deep, cut usually in winter and left to dry.

As soon as the branches were dry enough to burn well, fire was set and they were consumed, leaving only the blackened boles and heavier branches. These were then chopped into manageable lengths of from ten or twelve to fifteen feet, and the neighbors were called to a logging bee. Plenty of whiskey was said to make the work light. The heavier logs were drawn by oxen alongside of each other; the next heavier drawn alongside were rolled up on top of the large ones by means of hand-spikes, the next on top of the second tier, and so on, and the smaller tops and heavy branches were peaked on top of all. A fire was then started on top of these piles which ate its way downward. Soon all the clearing was covered with heavy, deep, glowing fires and the thickest logs after smouldering for days were at last consumed. Next the ashes were leached, boiled down and roasted for potash, which found a market in Europe, and yielded the first salable crop of the farm.

Next, pains were taken to scrape little hollows between the roots where a few potatoes could be planted, without any reference to placing them in

rows. Occasionally separate little pits were made among the roots for a few grains of wheat, which was cut with a sickle and thrashed with flails. Perhaps a sack of grain, for the family bread, could thus be raised from an acre or so.

Gradually the roots nearest the surface decayed and were laboriously chopped and grubbed out, wheat sown and covered with very small strong V-shaped harrows, which bounced about among the stumps. Still later larger roots and some of the smallest stumps were grubbed out of the way, and at last the big stumps were laboriously dug out or pulled out with machines worked by oxen. These first small clearings were enlarged from year to year, but a whole lifetime was usually consumed before anything like an ordinary size farm was brought under perfect cultivation and fitted for the use of reaping and sowing machines.

Besides the difficulty of clearing away these dense woods, the first small farms, opening the ground to the light, were subject to late and early frosts, on account of the ground being so covered with humus and leaves that it could absorb but little heat. While surrounded with a dense forest wall the winds could not reach them with heat brought from afar, and the day temperature fell rapidly.

One morning when I was on my way through the woods I came to a little clearing where there was a crop of wheat beginning to head. Frost had fallen on it the night before, and a poor woman was walking along the side of the field weeping, wiping her eyes on her apron, and crying, "Oh! the frost, the frost, the weary frost. We'll hae na crop this year and we had nane the last. We'll come to poverty.

We'll come to poverty." After a great part of the forest was cleared, the stumps removed, the humus plowed under, and the soil opened to the sunshine and equalizing winds these frosts disappeared.

In the spring, when the maple sap began to flow, all the young people had merry, merry times, shared by their elders who remembered their own young days. The sap was boiled in the woods, and when sugaring off at a certain stage it made wax which was cooled in the snow. A big fire was made and the evening spent around it eating maple "wax," and, later on in the "sugaring off," the sugar also. Other amusements were meeting for song singing and general merry-making, but dancing was seldom indulged in, being frowned on by their pious elders.

Most of the settlers were pious and faithfully attended church. All were exceedingly economical on account of the necessity, long continued, of saving while making a living in the wilderness. There was good reason for the scarcity of Americans in that community because of the far greater ease with which a living could be made on the prairies and oak openings of the Middle and Western States.

When I came to the Georgian Bay of Lake Huron, whose waters are so transparent and beautiful, and the forests about its shores with their ferny, mossy dells and deposits of boulder clay, it seemed to be a most favorable place for study, and as I was also at this time out of money again I was eager to stay a considerable time. In a beautiful dell, only a mile or two from the magnificent bay, I fortunately

found work in a factory where there was a sawmill and lathes for turning out rake, broom, and fork handles, etc.

During the winter months of his sojourn in this dell near Meaford he had the companionship of his youngest brother, Daniel, who also was seeking employment in Canada at this time. A wee letter, one by two inches in size, dated Meaford, October 23, 1864, and addressed in playful mood to his sister Mary, gives an account of the people in this "Hollow" where they found employment. "Our family," he writes, "consists, first of all, of me, a most good man and big boy. Second, Daniel, who is also mostly big and three or four trifles funny. Third, Mr. William Trout, an unmarried boy of thirty summers, who, according to the multiplicity of common prognostications, is going to elect a lady mistress of Trout's Hollow some day. Fourth, Charles Jay, a bird of twenty-five, who is said to coo to a Trout. . . . This Jay and last mentioned Trout are in partnership and are the rulers of the two Scotch heather Muirs." He also mentions Mary and Harriet, two very capable sisters of William Trout, one of them the housekeeper and the other a school-teacher. "We all live happily together," continues the letter. "Occasionally an extra Trout comes

upstream or a brother Jay alights at our door, but they are not of our family." The fears of his sister, lest they work too hard, are met by the declaration that they are working neither hard nor long hours; that they "are growing fatter and fatter, and perhaps will soon be as big as Gog and Magog."

Mr. Trout, who was still living in 1916, at my request furnished me with an account of the coming of the Muirs to Meaford. It seems that John and Daniel occasionally traveled independently in their search for work, meeting by arrangement at stated times and places, or, if they had lost connection, found each other again by means of letters from home. One midsummer day in 1864 Daniel appeared in search of work at the Trout sawmill. He remained there six weeks until his brother John had been located through home communications. The two then resumed their botanical journeyings until the approach of winter.

Scenting a possible chance to exercise his inventive genius, John was persuaded that the Hollow might be a good place in which to pass the long Canadian winter. One evening in autumn, 1864, they both arrived at the mill, outlined their plans, and were engaged to assist in building an addition to the rake factory. John's mechanical ability soon proved so

advantageous for his employers that they entered into a contract with him to make one thousand dozen rakes and thirty thousand broom handles.

When John Muir made his rake and broom handle contract with us [wrote Mr. Trout], he also made a proposition to be given the liberty of improving the machinery as he might determine, and that he should receive therefore half the economical results of such improvement during a given period. An arrangement of this kind was entered into, and he began with our self-feeding lathe which I considered a nearly perfect instrument for turning rake, fork, and broom handles and similar articles. By rendering this lathe more completely automatic he nearly doubled the output of broom handles. He placed one handle in position while the other was being turned. It required great activity for him to put away the turned handle and place the new one in position during the turning process. When he could do this eight broom handles were turned in a minute. Corresponding to this lathe I had on the floor immediately above him a machine that would automatically saw from the round log, after it was fully slabbed, eight handles per minute. But setting in the log and the slabbing process occupied about three eighths of the time. This, with keeping saws and place in order, cut the daily output to about twenty-five hundred. John had his difficulties in similar ways and at best could not get ahead of the sawing. It was a delight to see those machines at work. He devised and started the construction of several new automatic machines, to make the

different parts of the hand rakes, having previously submitted and discussed them with me.

Daniel returned to Wisconsin after a time, but John continued at Meaford for about a year and a half. During the spring and summer he pursued his favorite study of botany with increasing enthusiasm and industry. Sundays and the long summer evenings were invariably devoted to the plants and the rocks. The lack of a comprehensive manual of the Canadian flora was, of course, a serious disadvantage and many herbarium sheets bear testimony to difficulties he encountered. They also testify to expeditions, made in 1865, of which no other record remains, for here, among numerous specimens from the "garden of J. Lufthorn" and the forests of Owen Sound and Georgian Bay, are trophies from the "Devil's Half Acre, forty miles northeast from Hamilton" and from the vicinity of Niagara Falls.

In Canada, as at the University of Wisconsin, Muir was his own severest taskmaster. His bed, mounted on a cross axle and connected with an alarm clock, was so contrived that it set him on his feet at five o'clock. If he happened to lie in it diagonally he sometimes was thrown out sharply on the floor. "The fall of John's bed," according to Mr. Trout, "was a wake-up signal for every one in the house. If

we heard a double shock, caused by a roll-out, we had the signal for a good laugh on John, of which he had further jolly reminders at the breakfast table." His conversational powers already made him a marked member of any company, and he was never loath to engage in a friendly argument at meal time. But a book was always kept within reach for snatches of reading, and his studious habits kept him at work till far into the night.

His young sisters at this time had in him an interesting correspondent. Apparently they did not give him sufficiently detailed information about home affairs to satisfy his curiosity, for he complains to one of them that, while her letter gave pleasure, "it was not great enough in any of its dimensions, minute enough in its details, or sufficiently knick-knacky in its morals." "Here," he writes, "is a form for a small letter from your locality, though as regards style I by no means commend it to your exact imitation."

HICKORY DALE, 1000 FT. ABOVE THE SEA
January 1st, 1865

DEAR JOHN:

We are pretty well, but are fast growing weary of the many changes which now seem to be of daily occurrence. We now live in a room made in the upper part of the barn next the orchard.

We reach it by an outside stair. It is hard carrying up the wood and water. Once I slipt and fell with an armful of burr oak firewood and sprained my weeping sinew. The cattle live in the house now — the cows in the cellar, the horses on the first floor, and the sheep upstairs. Nan will not go past the cellar door, but we do the best we can.

The apple trees are dug up and planted upon the cold rocky summit of the observatory where I am sure they will not grow well. The cattle do not stand the severe weather well this winter. They stand drawn together like a dog licking a pot.

Aunt Sally is married, and Lowdy Grahm has the whooping cough. Write soon or sooner.

From your Sis

MARY

P.S. Carrie Muir has enlisted and David is very angry.

There, Mary, you should put some grit and bone of that kind in your letters. I scribble that nonsense only to show you that these small matters which occur in the neighborhood and which you do not think worthy of note are still of interest to us when so far from home. . . .

Affectionately

JOHN

To his friend Emily Pelton he writes under date of May 23, 1865:

We live in a retired and romantic hollow. . . . Our social advantages are, of course, few and, for my part, I do not seek to extend my acquaintance, but work and study and dream in this retirement. . . . Our tall, tall forest trees are now all alive, and the ocean of mingled blossoms and leaves waves and curls and rises in rounded swells farther and farther away, like the thick smoke from a factory chimney. Freshness and beauty are everywhere; flowers are born every hour; living sunlight is poured over all, and every thing and creature is glad. Our world is indeed a beautiful one, and I was thinking, on going to church last Sabbath, that I would hardly accept of a free ticket to the moon or to Venus, or any other world, for fear it might not be so good and so fraught with the glory of the Creator as our own. Those miserable hymns, such as

> "This world is all a fleeting show
> For man's delusion given,"

do not at all correspond with my likings, and I am sure they do not with yours.

The following letter, addressed to three of his sisters, is of interest because it exhibits his love of fun from another angle. The proposed sale of the Hickory Hill farm was not consummated at this time. The Fountain Lake farm, however, to which he had become so deeply attached, was sold about this time by his brother-in-law, David Galloway.

Trout's Hollow, C. W.
December 24, 1865

Dear Sisters Mary, Anna, and Joanna:
I feel that I owe you a long apology for not replying to your long good letters. I have been exceedingly busy, but this is not a sufficient excuse. My bed sets me upon my feet at five, and I go to bed at eleven, and have to do at least two days' work every day, sometimes three. I sometimes almost forget where I am, what I am doing, or what my name is. I often think of you and wish with all my might that I could see and chat with you. Were it not that I have no time to think, I would grow home-sick and die in a day or two. My picture of home is in my room, and when I see it now I feel sorry at the thought of its being sold. Fountain Lake, Oak Grove, Little Valley, Hickory Hill, etc., with all of their long list of associations, pleasant and otherwise, will soon have passed away and been forgotten.

I was glad to hear that Dan was visiting so long with you. I suppose that he told you many a surprising and funny tale of Canada. I think that he can make and enjoy a joke very well indeed. I had a letter from him, and he says that he has plenty of money, clothes, and hope for the future.

I wish you were here. You would find queer

things. We have queer trees, queer flowers, queer streams, queer weather, queer customs, and queer people with queer names. One man is called Lake, another Jay, Eagle, Raven, Stirling, Bird. Mr. Jay married Miss Raven a few weeks ago. One day at the table we were speaking about names and Mr. Trout said that "Rose" was a fine name, and I said that Muir was better than Trout, or Jay, or Rose, or Eagle, because that though a Jay or Eagle was a fine bird, and a Trout a good fish, and Rose a fine flower, a Scottish Muir or Moor had fine birds, and fine fishes in its streams, and fine wild roses together with almost every other excellence, but above all "the bonnie bloomin' heather." We may well be proud of our name.

Another story. One Sunday I returned from meeting before the rest and was in the house alone reading one of the "Messengers" mother sent, when a little bird flew into the house and the cat caught it. I chased the cat out of the house, and through the house, till I caught her, to save the bird's life, but she would not let it go, and I choked her and choked her to make her let it go until I choked her to death, though I did not mean to, and they both lay dead upon the floor. I waited to see if she would not receive back one of her nine lives, but to my grief I found that I had taken them

all, so I buried her beside some cucumber vines in the garden. When the rest came home I told what had occurred, and Charley Jay, who is as full of wit and jokes as the pond was of cold water one night, said, "Now John is always scolding us about killing spiders and flies but when we are away he chokes the cats," and they kept saying "poor kitty," "poor puss," for weeks afterwards to make me laugh.

I will write you all a long letter some day.

[JOHN MUIR]

The more serious side of his nature and the aspirations he cherished at this time come to expression in a letter which marks the beginning of a long and remarkable correspondence with Mrs. Jeanne C. Carr, whose acquaintance with John Muir, as stated in an earlier chapter, began when he exhibited his wooden clocks at the Wisconsin State Fair in 1860. How much her friendship was to mean to the budding naturalist appears clearly even in the earliest of his letters to her.

From the time of Chancellor John Hiram Lathrop's resignation in July, 1859, to the choice of Paul A. Chadbourne as head of the University of Wisconsin eight years later, Professor John W. Sterling was virtually president. When John Muir failed to return

to the University in the autumn of 1864 the faculty, knowing how eager he was to continue his studies, invited him to return as a free student and Professor Sterling was instructed to communicate this decision to him. Whether this invitation was for the autumn of 1864 or 1865 is not entirely clear. Unfortunately the letter never reached him and the opportunity could not be improved. This is the letter of which he writes that he "waited and wearied for it a long time."

TROUT'S MILLS, NEAR MEAFORD, [C. W.]
September 13*th*, [1865]

DEAR MRS. CARR:

Your precious letter with its burden of cheer and good wishes has come to our hollow, and has done for me that work of sympathy and encouragement which I know you kindly wished it to do. It came at a time when much needed, for I am subject to lonesomeness at times. Accept, then, my heartfelt gratitude — would that I could make a better return.

I am sorry over the loss of Professor Sterling's letter, for I waited and wearied for it a long time. I have been keeping up an irregular course of study since leaving Madison, but with no great success. I do not believe that study, especially of the Natural Sciences, is

incompatible with ordinary attention to business; still, I seem to be able to do but one thing at a time. Since undertaking, a month or two ago, to invent new machinery for our mill, my mind seems to so bury itself in the work that I am fit for but little else; and then a lifetime is so little a time that we die ere we get ready to live.

I would like to go to college, but then I have to say to myself, "You will die ere you can do anything else." I should like to invent useful machinery, but it comes, "You do not wish to spend your lifetime among machines and you will die ere you can do anything else." I should like to study medicine that I might do my part in lessening human misery, but again it comes, "You will die ere you are ready to be able to do so." How intensely I desire to be a Humboldt! but again the chilling answer is reiterated. Could we but live a *million* of years, then how delightful to spend in perfect contentment so many thousand years in quiet study in college, so many amid the grateful din of machines, so many among human pain, so many thousands in the sweet study of Nature among the dingles and dells of *Scotland*, and all the other less important parts of our world! Then *perhaps* might we, with at least a show of reason, "shuffle off this mortal coil" and look back

upon our star with something of satisfaction.

I should be ashamed — if shame might be in the other world — if any of the powers, virtues, essences, etc., should ask me for common knowledge concerning our world which I could not bestow. But away with this *aged* structure and we are back to our handful of hasty years half gone, all of course for the best did we but know all of the Creator's plan concerning us. In our higher state of existence we shall have time and intellect for study. Eternity, with perhaps the whole unlimited creation of God as our field, should satisfy us, and make us patient and trustful, while we pray with the Psalmist, "So teach us to number our days that we may apply our hearts unto wisdom."

I was struck with your remarks about our real home as being a thing of stillness and peace. How little does the outer and noisy world in general know of that "real home" and real inner life! Happy indeed they who have a friend to whom they can unmask the workings of their real life, sure of sympathy and forbearance!

I sent for the book which you recommend. I have just been reading a short sketch of the life of the mother of Lamartine. These are beautiful things you say about the humble life of our Saviour and about the trees gathering in the sunshine.

What you say respecting the littleness of the number who are called to "the pure and deep communion of the beautiful, all-loving Nature," is particularly true of the hard-working, hard-drinking, stolid Canadians. In vain is the glorious chart of God in Nature spread out for them. So many acres chopped is their motto, so they grub away amid the smoke of magnificent forest trees, black as demons and material as the soil they move upon. I often think of the Doctor's lecture upon the condition of the different races of men as controlled by physical agencies. Canada, though abounding in the elements of wealth, is too difficult to subdue to permit the first few generations to arrive at any great intellectual development. In my long rambles last summer I did not find a single person who knew anything of botany and but a few who knew the meaning of the word; and wherein lay the charm that could conduct a man, who might as well be gathering mammon, so many miles through these fastnesses to suffer hunger and exhaustion, was with them never to be discovered. Do not these answer well to the person described by the poet in these lines:

> "A primrose by the river's brim,
> A yellow primrose was to him,
> And nothing more."

I thank Dr. Carr for his kind remembrance

of me, but still more for the good patience he had with so inapt a scholar. We remember in a peculiar way those who first give us the story of Redeeming Love from the great book of revelation, and I shall not forget the Doctor, who first laid before me the great book of Nature, and though I have taken so little from his hand, he has at least shown me where those mines of priceless knowledge lie and how to reach them. O how frequently, Mrs. Carr, when lonely and wearied, have I wished that like some hungry worm I could creep into that delightful kernel of your house — your library — with its portraits of scientific men, and so bountiful a store of their sheaves amid the blossom and verdure of your little kingdom of plants, luxuriant and happy as though holding their leaves to the open sky of the most flower-loving zone in the world!

That "sweet day" did, as you wished, reach our hollow, and another is with us now. The sky has the haze of autumn and, excepting the aspen, not a tree has motion. Upon our enclosing wall of verdure new tints appear. The gorgeous dyes of autumn are too plainly seen, and the forest seems to have found out that again its leaf must fade. Our stream, too, has a less cheerful sound and as it bears its foam-bells pensively away from the shallow rapids in

the rocks it seems to feel that summer is past.

You propose, Mrs. Carr, an exchange of thoughts for which I thank you very sincerely. This will be a means of pleasure and improvement which I could not have hoped ever to have been possessed of, but then here is the difficulty: I feel that I am altogether incapable of properly conducting a correspondence with one so much above me. We are, indeed, as you say, students in the same life school, but in very different classes. I am but an alpha novice in those sciences which you have studied and loved so long. If, however, you are willing in this to adopt the plan that our Saviour endeavored to beat into the stingy Israelites, *viz.* to "give, hoping for nothing again," all will be well, and as long as your letters resemble this one before me, which you have just written, in genus, order, cohort, class, province, or kingdom, be assured that by way of reply you shall at least receive an honest "Thank you."

Tell Allie that Mr. Muir thanks him for his pretty flowers and would like to see him, also that I have a story for him which I shall tell some other time. Please remember me to my friends, and now, hoping to receive a letter from you at least *semi-occasionally*, I remain,

Yours with gratitude

JOHN MUIR

Brought up in the strictest tenets of traditional orthodoxy, John Muir's scientific studies gradually forced him to reconstruct the factual basis of his religious beliefs. Darwin's "Origin of Species" had appeared in 1859, and a fierce conflict was raging between champions of the theory of special creation and what now came to be known as the theory of organic evolution. Even at the university he had become aware of the chasm that was opening between the old biblical literalism and the more comprehensive interpretations of religion. A certain prominent clergyman of Madison, who was an advocate of a neighboring sectarian college, had often assailed what he was pleased to call the atheistic views of certain members of the faculty. Without relaxing his hold on the essentials of his Protestant faith, John Muir's sympathies were unmistakably enlisted on the side of liberalism. He promptly and quite naturally adopted the view that the Bible is not authoritative in the realm of natural science, but that in its explanations of the facts and phenomena of the universe it exhibits the same gradual unfolding of human knowledge which has marked man's progress in other spheres of thought.

It is not easy to trace the steps by which he broke away from the narrow Biblicism of his training, but he would from this period onward

have subscribed at any time to the statement of Louis Agassiz that "a physical fact is as sacred as a moral principle." Lyell, who since 1830 had prepared the way for Darwin by showing that the world is very old and the outcome of a long development, excited Muir's enthusiastic interest. Later he became a warm friend of J. D. Hooker and Asa Gray, two of Darwin's earliest supporters.

Nathaniel S. Shaler, who passed through the same period of readjustment as Muir, confessed[1] that his first contact with natural science in his youth and early manhood had the not uncommon effect of leading him far away from Christianity and that in later years a further insight into the truths of nature had gradually forced him back again to the ground from which he had departed. It is interesting to find that Muir, probably in spite of his upbringing, had no such experience. He saw that the alleged antagonism between natural science and the Bible was due to the accumulated lumber of past generations of faulty Bible teaching. By promptly discarding the crudities of this teaching and adopting a more rational historical interpretation of the Bible he saved his faith both in religion and in science.

In a letter from "The Hollow," written to

[1] *The Interpretation of Nature* (1895), Preface, p. iv.

Mrs. Carr toward the end of January, 1866, we get a glimpse of his mental workings. To the statement that she was writing her letter in the delicious quiet of a Sabbath evening in the country, "with cow bells tinkling instead of steeple chimes, the drone and chirp of myriad insects for choral service, depending for a sermon upon the purple bluffs and flowing river," he responds as follows:

I was interested with the description you gave of your sermon. You speak of such services like one who appreciates and relishes them. But although the page of Nature is so replete with divine truth it is silent concerning the fall of man and the wonders of Redeeming Love. Might she not have been made to speak as clearly and eloquently of these things as she now does of the character and attributes of God? It may be a bad symptom, but I will confess that I take more intense delight from reading the power and goodness of God from "the things which are made" than from the Bible. The two books harmonize beautifully, and contain enough of divine truth for the study of all eternity. It is so much easier for us to employ our faculties upon these beautiful tangible forms than to exercise a simple, humble, living faith such as you so well describe as enabling us to reach out joyfully into the future to *expect* what is promised as a thing of to-morrow.

On another occasion, in describing to a friend his discovery of *Calypso borealis*, he wrote:

I cannot understand the nature of the curse,

"Thorns and thistles shall it bring forth to thee." Is our world indeed the worse for this thistly curse? Are not all plants beautiful, or some way useful? Would not the world suffer by the banishment of a single weed? The curse must be within ourselves.

He was at this time in the full flush of his inventive activity and working hard to complete the contract into which he had entered with his employers.

I have been very busy of late making practical machinery [he writes]. I like my work exceeding well, but would prefer inventions which would require some artistic as well as mechanical skill. I invented and put in operation a few days ago an attachment for a self-acting lathe which has increased its capacity at least one third. We are now using it to turn broom handles, and as these useful articles may now be made cheaper, and as cleanliness is one of the cardinal virtues, I congratulate myself on having done something, like a true philanthropist, for the real good of mankind in general. What say you? I have also invented a machine for making rake teeth, and another for boring for them, and driving them, and still another for making the bows, still another used in making the handles, still another for bending them — so that rakes may now be made nearly as fast again. Farmers will be able to produce grain at a lower rate, and the poor to get more bread to eat. Here is more philanthropy, is it not? I sometimes feel as though I was losing time here, but I am at least receiving my first lessons in practical mechanics and as one of the firm here is a

millwright and as I am permitted to make as many machines as I please and to remodel those now in use, the school is a pretty good one.

The thirty thousand broom handles were all turned and stored in every available place about the factory for final seasoning when one stormy night about the first of March, 1866, the building took fire. There was no means of fire control and soon the sawmill and factory with all their laboriously manufactured contents were reduced to a pile of ashes. Since there was no insurance, the owners having lost practically everything, John Muir made as equitable a settlement as possible, taking notes bearing neither interest nor date of payment. He always took pride in the thought that his employers justified his confidence, for every cent was ultimately paid. Leaving some of his books to his Sunday School class of admiring boys, and some of his textbooks on botany to friends whom he had interested in this study, he turned his face toward the States. The motives which influenced him to go to Indianapolis and what he found there are the subject of autobiographical notes which follow in the next chapter.

How warm a place he had made for himself in that Meaford circle of friends we learn from a sheaf of kindly letters that followed him

southward on his departure soon after the fire. "Was there ever more freedom of speech, thought, and action felt on earth than in that Hollow?" wrote one of the Trout sisters. "We were all equal; every one did as he chose. Ah me! I hope that the happy days will return; that we may be there again, and that you might be one of our number for at least a short time. The circle would be incomplete without you." "John," wrote another, "you don't know how we missed the little star you used to have in the window for us when we would be coming home after night, and the cheerful fire. And not least, we missed the pleasant welcome you had for us."

But the disaster which led John to resume his wanderings also scattered the members of the Meaford circle far and wide over Canada and the United States. In more than the literal sense he had put a star in the window for many of them, and for several decades grateful letters tell of their progress in the new interests which he had brought into their lives. One of the last to survive was William H. Trout, and with a paragraph from the last letter that Muir wrote to him, in 1912, we conclude the account of his Canadian sojourn:

I am always glad to hear from you. Friends get closer and dearer the farther they travel on life's

journey. It is fine to see how youthful your heart remains, and wide and far-reaching your sympathy, with everybody and everything. Such people never grow old. I only regret your being held so long in mechanical bread-winning harness, instead of making enough by middle age and spending the better half of life in studying God's works as I wanted you to do long ago. The marvel is that in the din and rattle of mills you have done so wondrous well. By all means keep on your travels, since you know so well how to reap their benefits. I shall hope to see you when next you come West. And don't wait until the canal year. Delays are more and more dangerous as sundown draws nigh.

CHAPTER V

FROM INDIANA TO CALIFORNIA

1866–1868

A LITTLE more than a month after the destruction of the mill in Trout's Hollow, John Muir had arrived at Indianapolis, Indiana, for early in May, 1866, he writes from there to his sister Sarah as follows:

I never before felt so *utterly homeless* as now. I do not feel sad, but I cannot find a good boarding-place, to say nothing of a home, and so I have not yet unpacked my trunk, and am at any moment as ready to leave this house for a march as were the Israelites while eating the passover. Much as I love the peace and quiet of retirement, I *feel* something within, some restless fires that urge me on in a way very different from my *real* wishes, and I suppose that I am doomed to live in some of these noisy commercial centers.

Circumstances over which I have had no control almost compel me to abandon the profession of my choice, and to take up the business of an inventor, and now that I am among machines I begin to *feel* that I have some talent that way, and so I almost think, unless things change soon, I shall turn my whole mind into that channel.

But even at this time, if one may judge from another passage in the same letter, the pro-

spective physician or inventor had not nearly so good a backing in his feelings as the naturalist. "The forest here," he writes, "is almost in full leaf. I have found wild flowers for more than a month now. I gathered a handful about a mile and a half from town this morning before breakfast. When I first entered the woods and stood among the beautiful flowers and trees of God's own garden, so pure and chaste and lovely, I could not help shedding tears of joy."

The considerations that influenced him to go to the capital of Indiana are best told in his autobiographical narrative which is resumed at this point:

> Looking over the map I saw that Indianapolis was an important railroad center, and probably had manufactories of different sorts in which I could find employment, with the advantage of being in the heart of one of the very richest forests of deciduous hard wood trees on the continent. Here I was successful in gaining employment in a carriage material factory, full of circular saws and chucks and eccentric and concentric lathes, etc. I first worked for ten dollars a week, without board, of course. The second week my wages were increased to eighteen a week, and later to about twenty-five a week. I greatly enjoyed this mechanical work, began to invent and introduce labor-saving improvements and was so successful that my botanical and geological studies were in danger of being seriously interrupted.

One day a member of the firm asked me, "How long are you going to stay with us?" "Not long," I said. "Just long enough to earn a few hundred dollars, then I am going on with my studies in the woods." He said, "You are doing very well, and if you will stop, we will give you the foremanship of the shop," and held out hopes of a partnership interest in the money-making business. To this I replied that although I liked the inventive work and the earnest rush and roar and whirl of the factory, Nature's attractions were stronger and I must soon get away.

A serious accident hurried me away sooner than I had planned. I had put in a countershaft for a new circular saw and as the belt connecting with the main shaft was new it stretched considerably after running a few hours and had to be shortened. While I was unlacing it, making use of the nail-like end of a file to draw out the stitches, it slipped and pierced my right eye on the edge of the cornea. After the first shock was over I closed my eye, and when I lifted the lid of the injured one the aqueous humor dripped on my hand — the sight gradually failed and in a few minutes came perfect darkness. "My right eye is gone," I murmured, "closed forever on all God's beauty." At first I felt no particular weakness. I walked steadily enough to the house where I was boarding, but in a few hours the shock sent me trembling to bed, and very soon by sympathy the other eye became blind, so that I was in total darkness and feared that I would become permanently blind.

When Professor Butler learned that I was in Indianapolis, he sent me a letter of introduction to

one of the best families there, and in some way they heard of the accident and came to see me and brought an oculist, who had studied abroad, to examine the pierced eye. He told me that on account of the blunt point of the file having pushed aside the iris, it would never again be perfect, but that if I should chance to lose my left eye, the wounded one, though imperfect, would then be very precious. "You are young and healthy," he said, "and the lost aqueous humor will be restored and the sight also to some extent; and your left eye after the inflammation has gone down and the nerve shock is overcome — you will be able to see about as well as ever, and in two or three months bid your dark room good-bye."

So I was encouraged to believe that the world was still to be left open to me. The lonely dark days of waiting were cheered by friends, many of them little children. After sufficient light could be admitted they patiently read for me, and brought great handfuls of the flowers I liked best.

As soon as I got out into Heaven's light I started on another long excursion, making haste with all my heart to store my mind with the Lord's beauty and thus be ready for any fate, light or dark. And it was from this time that my long continuous wanderings may be said to have fairly commenced. I bade adieu to all my mechanical inventions, determined to devote the rest of my life to the study of the inventions of God. I first went home to Wisconsin, botanizing by the way, to take leave of my father and mother, brothers and sisters, all of whom were still living near Portage. I also visited the neighbors I had known as a boy, renewed my

acquaintance with them after an absence of several years, and bade each a formal good-bye. When they asked where I was going, I said, "Oh! I don't know — just anywhere in the wilderness southward. I have already had glorious glimpses of the Wisconsin, Iowa, Michigan, Indiana and Canada wildernesses; now I propose to go south and see something of the vegetation of the warm end of the country, and if possible wander far enough into South America to see tropical vegetation in all its palmy glory."

All the neighbors wished me well and advised me to be careful of my health, reminding me that the swamps in the south were full of malaria. I stopped overnight at the home of an old Scotch lady who had long been my friend, and was now particularly motherly in good wishes and advice. I told her that as I was sauntering along the road near sundown I heard a little bird singing, "The day's gone, The day's done." "Weel, John, my dear laddie," she replied, "your day will never be done. There is no end to the kind of studies you are engaged in, and you are sure to go on and on, but I want you to remember the fate of Hugh Miller." She was one of the finest examples I ever knew of a kind, generous, great-hearted Scotchwoman.

After all the good wishes and good-byes were over, and I had visited Fountain Lake and Hickory Hill and my first favorite gardens and ferneries, I took a thousand-mile walk to the Gulf of Mexico from Louisville, across Kentucky, Tennessee, North Carolina, Georgia, and Florida.

At this point Muir's memoirs pass in a few

sentences over the entire period between the beginning of this remarkable walk and his arrival in California. His notes on the margin of the manuscript, however, show that he intended to expand this portion of his autobiography considerably, probably by using parts of the journal which he kept during his southward journey in 1867. In the mean time this journal, published separately under the title "A Thousand-Mile Walk to the Gulf," has become accessible to all interested readers. There are, however, some unpublished passages, crossed out by the author during a revision in later life, that throw light upon the struggle with himself in which he was engaged during his stay in Indianapolis.

Muir's more intimate friends like the Carrs, Butlers, and Merrills had ere this observed in him a strange kind of restlessness, an inward compulsion, which at times caused him to forsake his tools and his occupation for the beauteous ways of those middle western wildernesses that still were pressing close upon the edge of towns. Mrs. Carr, indeed, used to speak of Muir's "good demon" to whose behests he paid heed as did Socrates to his invisible mentor. A letter written to her but two days before he started on his southward journey reveals him under the spell of his good

genius. "I wish I knew where I was going," he writes. "Doomed to be 'carried of the spirit into the wilderness,' I suppose. I wish I could be more moderate in my desires, but I cannot, and so there is no rest."

The opening sentences of his journal, also, no less than the cover inscription "John Muir, Earth-planet, Universe," contain significant bits of self-revelation. "Few bodies," he wrote, "are inhabited by so satisfied a soul as to be allowed exemption from extraordinary exertion through a whole life. The sea, the sky, the rivers have their ebbs and floods, and the earth itself throbs and pulses from calms to earthquakes. So also there are tides and floods in the affairs of men, which in some are slight and may be kept within bounds, but in others they overmaster everything." He was one of the "others."

The farewell visit to Fountain Lake and Hickory Hill had a much deeper significance for him than one would infer from the brief reference to it in his memoirs. Twenty-seven years later, in an address on "National Parks and Forest Reservations," delivered at a meeting of the Sierra Club in San Francisco, he related the plans and hopes he had entertained with regard to Fountain Lake:

The preservation of specimen sections of natural

flora — bits of pure wildness — was a fond, favorite notion of mine long before I heard of national parks. When my father came from Scotland, he settled in a fine wild region in Wisconsin, beside a small glacier lake bordered with white pond-lilies. And on the north side of the lake, just below our house, there was a carex meadow full of charming flowers — cypripediums, pogonias, calopogons, asters, golden-rods, etc. — and around the margin of the meadow many nooks rich in flowering ferns and heathworts. And when I was about to wander away on my long rambles I was sorry to leave that precious meadow unprotected; therefore, I said to my brother-in-law, who then owned it, "Sell me the forty acres of lake meadow, and keep it fenced, and never allow cattle or hogs to break into it, and I will gladly pay you whatever you say. I want to keep it untrampled for the sake of its ferns and flowers; and even if I should never see it again, the beauty of its lilies and orchids is so pressed into my mind I shall always enjoy looking back at them in imagination, even across seas and continents, and perhaps after I am dead."

But he regarded my plan as a sentimental dream wholly impracticable. The fence he said would surely be broken down sooner or later, and all the work would be in vain. Eighteen years later I found the deep-water pond-lilies in fresh bloom, but the delicate garden-sod of the meadow was broken up and trampled into black mire. On the same Wisconsin farm there was a small flowery, ferny bog that I also tried to save. It was less than half an acre in area, and I said, "Surely you can at least keep for me this little bog." Yes, he would try. And when I

had left home, and kept writing about it, he would say in reply, "Let your mind rest, my dear John; the mudhole is safe, and the frogs in it are singing right merrily." But in less than twenty years the beauty of this little glacier-bog also was trampled away.

From a letter to his friend Catharine Merrill, written immediately after his visit to Muir's Lake, or Fountain Lake, as he was later accustomed to call it, we excerpt a more than usually detailed and appreciative description. He had started from Indianapolis about the middle of June, taking with him his young friend Merrill Moores. Eager to see the flora of the Illinois prairies in June, he went to Decatur near the center of the state and then northward by way of Rockford and Janesville. A week was spent in botanizing on the prairie seven miles southwest of Pecatonica, and from there they made their way to his old home in Wisconsin.

We have had our last communion with Muir's Lake [he writes from there on the 12th of August]. It was glassy, calm, and full of shadows in the twilight. I have said farewell to nearly all my friends, too, and will soon leave home once more for I know not where.

You would enjoy a visit to that rocky hill we have spoken of so often, though a mere pimple, I suppose, to the Alps you have enjoyed. The most of Wiscon-

sin is not more than two hundred and fifty or three hundred feet above Lake Michigan, or about one thousand feet above the sea. The Blue Mounds, a few miles west of Madison, are only one thousand six hundred and seventy feet above the sea — the highest [1] land in Wisconsin. Our Observatory is perhaps one hundred and fifty or one hundred and eighty feet above the plain. It is a broad hill with long sloping sides, and with a great pile of whinstone blocks cast upon the top. It is not quite bare in any part, for its sides are clothed richly in white and black oaks, and the rocky summit has gray cedars and rock ferns. A great many ravines run up against the rocks on every side; these have the Desmodiums and the harebells and many precious ferns and rare peculiar plants of their own. One of these ravines has evidently been scooped out for a fern garden. One hundred and twenty thousand of my favorite Osmundas live there, all regularly planted at equal distances.

The highest point commands a landscape circle of about one thousand square miles, composed of ten or twelve miles of the Fox River, Lake Puckawa and five or six nameless little lakes — marsh and woodland exquisitely arranged and joined — and about two hundred hills, and some prairie. Ah! these are the gardens for me! There is landscape gardening! While we were there, clouds of every texture and size were held above its flowers and moved about as needed, now increasing, now diminishing, lighter and deeper shadow and full sunshine in small and greater pieces, side by side as each portion of the

[1] Rib Hill in Marathon County, 1940 feet, is now regarded as the highest point.

great garden required. A shower, too, was guided over some miles that required watering. The streams and the lakes and dens and rains and clouds in the hand of God weighed and measured myriads of plants daily coming into life, every leaf receiving its daily bread — the infinite work done in calm effortless omnipotence.

But now, Miss Merrill, we must leave our garden, and I am sure I do it with more pain than I should ever feel in leaving all the *jardins des plantes* in the world, where poor exiled flowers from all countries are mixed and huddled in royal pens.

After a botanical week spent as the guest of his Madison friends, the Butlers and the Carrs, he returned to Indianapolis with the overmastering impulse strong within him, and started from there by rail for Louisville, Kentucky, on the first of September. "I steered through the big city by compass without speaking a word to any one," he wrote in his journal. "Beyond the city I found a road running southward, and after passing a scatterment of suburban cabins and cottages I reached the green woods and spread out my pocket map to rough-hew a plan for my journey."

He was now fairly started on the longest and most adventurous of his many rambles. His general plan was to push southward by the leafiest, wildest, and least trodden ways.

This he apparently succeeded in doing, for only about twenty-two towns and cities are mentioned in his journal, a very small number when one considers the distance he covered. He carried with him nothing but a small rubber bag which held a change of underclothing, comb, towel, brush, and three small books — a New Testament, Milton's "Paradise Lost," and Burns's "Poems." At night he sought the shelter of farmhouses and country taverns and when this resource failed him he would lie down, as near Elizabethtown, Kentucky, "in the bushes by guess," or enter a schoolhouse and sleep "on the softest-looking of the benches." Indeed, there were stretches in his walk, in the sparsely populated Cumberland mountain region, where he often had "to sleep with the trees in the one great bedroom of the open night."

When he reached Savannah, Georgia, his money was all but gone and the new supply, which he had directed his brother to send thither, either had not arrived or was being withheld by the express agent. He was unable to find work and his impecunious condition did not permit him to live at an inn. It is characteristic of Muir's shrewdness and freedom from ordinary prejudices and superstitions that under these circumstances he sought out

the beautiful Bonaventure Cemetery, four miles east of Savannah. There he felt secure from night-prowling negroes, and his scientific interest was gratified by "one of the most impressive assemblages of animal and plant creatures" he had ever seen. He built himself a shelter of rushes in a thicket of sparkle-berry bushes and lodged there for a week until the money arrived. Meanwhile he had ample time to reflect on the significance of his surroundings, the place of death in the order of nature, and to describe the Tillandsia-draped oaks of Bonaventure. One of the most beautiful passages in all his writings is the account of this graveyard experience published under the title "Camping Among the Tombs" in "A Thousand-Mile Walk to the Gulf."

The journal of this walk is especially interesting because it shows how his ideas upon certain subjects were maturing at this time. The conception of death which he had inherited with his religious training was bound to yield to a better understanding of Nature's processes. He is convinced now that "on no subject are our ideas more warped and pitiable than on death. Instead of the friendly sympathy, the union of life and death so apparent in Nature, we are taught that death is an accident, a deplorable punishment for the

oldest sin, the 'arch-enemy' of life, etc. And upon these primary, never-to-be-questioned dogmas, these time-honored bones of doctrine, our experiences are founded, tissue after tissue in hideous development, until they form the grimmest body to be found in the whole catalogue of civilized Christian manufactures."

He thinks it especially unfortunate that town children, generation after generation of them, should be steeped in "this morbid death orthodoxy." In the country observation of Nature's on-goings is apt to interpose a corrective, whereas in towns the morbidity of burial customs makes an overpowering impression. "But let a child walk with Nature," he writes, "let him behold the beautiful blendings and communions of death and life, their joyous inseparable unity as taught in woods and meadows, plains and mountains and streams of our blessed star, and they will learn that death is stingless indeed, and has no victory, for it never fights. All is divine harmony."

These excerpts show that he had entirely abandoned the historicity of the early chapters of Genesis as well as the Pauline conception of death based upon them. It was inevitable that the anthropocentric nature philosophy of his day, which held that man was the principal

object of creation and that all things existed only for his good, should also fall under his condemnation. In spite of the long letters in which his father urged this theological view of Nature upon him as orthodox Biblical doctrine, he broke away from it radically as contrary to reason and evidence, though without being apparently disturbed in his own strong religious convictions.

The world, we are told [he confides to his journal], was made especially for man — a presumption not supported by all the facts. A numerous class of men are painfully astonished whenever they find anything, living or dead, in all God's universe, which they cannot eat or render in some way what they call useful to themselves. They have precise dogmatic insight of the intentions of the Creator, and it is hardly possible to be guilty of irreverence in speaking of *their* God any more than of heathen idols. He is regarded as a civilized, law-abiding gentleman in favor either of a republican form of government or of a limited monarchy; believes in the literature and language of England, is a warm supporter of the English constitution and Sunday schools and missionary societies; and is as purely a manufactured article as any puppet of a half-penny theater.

With such views of the Creator it is, of course, not surprising that erroneous views should be entertained of the creation. To such properly trimmed people, the sheep, for example, is an easy problem — food and clothing "for us," eating grass and

daisies white by divine appointment for this predestined purpose, on perceiving the demand for wool that would be occasioned by the eating of the apple in the Garden of Eden.

In the same pleasant plan, whales are storehouses of oil for us, to help out the stars in lighting our dark ways until the discovery of the Pennsylvania oil wells. Among plants, hemp, to say nothing of the cereals, is a case of evident destination for ships' rigging, wrapping packages, and hanging the wicked. Cotton is another plain case of clothing. Iron was made for hammers and ploughs, and lead for bullets; all intended for us. And so of other small handfuls of insignificant things.

In satirical mood he then asks these "profound expositors of God's intentions" whether the logic of their reasoning does not indicate also that man is the divinely intended prey of lions, tigers, alligators, and the myriads of noxious insects that plague and destroy him. To say that these maladjustments are "unresolvable difficulties connected with Eden's apple and the devil" is mere evasion. "It never seems to occur to these far-seeing teachers," he writes, "that Nature's object in making animals and plants might possibly be first of all the happiness of each one of them, not the creation of all for the happiness of one. Why should man value himself as more than a small part of the one great unit of creation?

And what creature of all that the Lord has taken the pains to make is not essential to the completeness of that unit — the cosmos? The universe would be incomplete without the smallest transmicroscopic creature that dwells beyond our conceitful eyes and knowledge."

He is convinced that the origin of man is bound up inextricably with the origin of every other creature and that therefore the animal world stands to him in a relation quite different from that which is assigned to it by the religious thought of his day. It arouses his indignation to think that "the fearfully good, the orthodox, of this laborious patchwork of modern civilization cry 'Heresy' on every one whose sympathies reach a single hair's breadth beyond the boundary epidermis of our own species." Nor is he able to accept the "closet researches of clergy" according to whom the world is to be cleansed and renewed by a "universal planetary combustion." Finding that whole kingdoms of creatures have enjoyed existence and returned to dust ere man appeared, he apprehends that human beings also, when they have "played their part in Creation's plan, may disappear without any general burning or extraordinary commotion whatever."

It was the middle of October when Muir

reached Florida by a little coastwise steamer, Sylvan Shore, then plying between Savannah and Fernandina. The latter town, with its fine harbor, was not only a principal port of entry for marine commerce, but was also the Atlantic terminus of a railroad, opened in 1861, that crossed Florida to Cedar Keys on the Gulf, a distance of one hundred and fifty-five miles. Along this railroad Muir footed his way leisurely across the flowery peninsula, though not without many side excursions into the swamps and pine-barrens wherever new plants beckoned to him. His enthusiasm over the novel flora, even at that time of the year, was unbounded. Several notebook drawings of the palmetto in all stages of growth and maturity testify to his rapture over this new plant acquaintance which, as often under such circumstances, took on a spiritual significance to him. "This palm was indescribably impressive," he writes, "and told me grander things than I ever got from human priest."

It will have occurred to the reader that Muir's habit of sleeping out in the open occasionally when night overtook him, without protection from mosquitoes, was especially dangerous in the South. In the Florida pine-barrens where one shelterless night he plashed and groped about until he found a place dry

enough to lie down, he observed marked evidences of malaria in the people whom he met. It is not surprising, therefore, that he was taken severely ill soon after he reached Cedar Keys.

In this remote and moribund little town Muir passed one of the most serious crises of his life. Had it not been for a family by the name of Hodgson, who took him into their home and nursed him back to health, he would have filled a nameless grave there soon after his arrival. Mr. Hodgson was the owner of a sawmill which he was operating on a spit of land about two miles from town. Having ascertained that schooners, freighted with lumber, sailed at irregular intervals from Cedar Keys to Galveston, Texas, Muir decided to apply for work at the mill and to await the coming of one of these schooners. His mechanical skill had scarcely secured him the desired employment when he was seized with an attack of fever so violent that he lay unconscious for days.

Exactly half a century after these events my wife and I followed Muir's old trail to Cedar Keys. We had some difficulty even in finding, two miles north of the town, the knoll on which had stood the Hodgson residence in which Muir was nursed back to health, and where he

wrote charming descriptions of his surroundings. Amid some picturesque old Tillandsia-draped live-oaks, clearly the same which he had sketched in his journal fifty years earlier, we found evidence of a former habitation — remnants of foundations, of garden-beds bordered by conch shells, all overgrown with cactus and underbrush. From here, during days of convalescence, he sketched Lime Key with its fringe of palmettos and yuccas, and watched the water-birds feeding when the tide went out. The snowy egret was no longer to be seen, but here and there a pelican flapped along on solemn wing; gulls made patches of gleaming white upon the water, and blue herons stalked along the reedy margin of the shore. They settled down at times in the tree-tops and looked out gravely from umbrageous caves. Seaward, through openings among the trees, one caught glimpses of distant islands — Keys — that floated like giant birds upon the purplish-blue waters, or faded into the opalescent haze, visible only as supports for the plumey palmetto crowns that waved on slender trunks above them.

It was amusing to see how the jaws of the natives dropped under a facial expanse of blank astonishment whenever I made inquiries about things as they were in Cedar Keys fifty

years ago. The longest memory was that of an old negro by the name of Jack Cloud, who was introduced as "McLeod." "You certainly are not a Scotchman," I said; "how do you come by that name?" Both he and the bench-ful of black cronies in front of the store broke into laughter. "No, sah," he said, "my name is Jack Cloud, sah, but ebberybody done calls me 'McLeod.'" "Were you born here?" "Oh, Lawd, no; I wuz bawn in Georgia, sah! Aftah de wah, I come down heah to start a cotton plantation for a man. Dat wuz in 1865. Yes, sah, de railroad wuz heah, but so delapurdated, it done took a train a week to get heah from Fernandina. De ties and piles wuz all rotten." He told how all the business then went over a strait to the neighboring Key of Atsena Otie where the first settlement had been begun. He remembered Hodgson's sawmill and had assisted in dismantling what was left of it many decades ago.

But neither he nor any one else had any recollection of "sharp-visaged" Captain Parsons and his schooner Island Belle which Muir, in January, 1868, saw threading her way along the tortuous channel that leads into the harbor of Cedar Keys. Fifty years had swallowed up all memory of him and his ship; of John Muir and his sojourn; of his friends and their home.

In this unlettered corner of the South, where decay in league with warmth and sun and rain obliterates the works of man more speedily than anywhere else, oblivion had swallowed up with equal haste the records of human memories.

Muir still was a convalescent when he boarded the Island Belle and sailed away to Cuba. For a month he made his home on the vessel, at anchor in the harbor of Havana, and spent his days botanizing on the outskirts of the city. The captain and the sailors were accustomed to gather about him when he returned in the evening in order to be entertained with a recital of the day's adventures and discoveries. He was consumed with a desire to explore the central mountain range of Cuba through the whole length of the island and then embark for South America. "My plan," he writes, "was to go ashore anywhere on the north end of the continent, push on southward through the wilderness around the headwaters of the Orinoco, until I reached a tributary of the Amazon, and float down on a raft or skiff the whole length of the great river to its mouth." It seems strange that such a trip should ever have entered the dreams of any person, however enthusiastic and full of daring, particularly under the disadvantages of poor health, of funds less than a hundred

dollars, and of the insalubrity of the Amazon valley.

His weakened physical condition forced him to admit that the plan to explore the mountainous wildernesses of Cuba was impossible. After visiting all the shipping agencies in a vain search for a vessel bound for South America this rash enterprise was abandoned also, or rather postponed, as he was accustomed to say. It was then that his mind turned to California, whose wonders had engaged his fancy for many a year. Upon consulting Captain Parsons concerning a passage to New York, the latter pointed out to him a trim little fruit schooner loaded with oranges and ready to weigh anchor. With his usual promptness in making decisions he was aboard the little fruiter and bound for New York within twenty-four hours.

Muir's enthusiastic description of this trip in one of the chapters of his "Thousand-Mile Walk to the Gulf" shows that he took almost as much delight in the scenes of the ocean as in those on land. But New York bewildered him by its size, throngs, and noise. By permission of the captain the schooner remained his home while he made arrangements for his passage to Panama. His walks about the city of New York, he says, "extended but little beyond

sight of my little schooner home. . . . Often I thought I would like to explore the city if, like a lot of wild hills and valleys, it was clear of inhabitants."

The North American Company at this time had ordered from New York a new steamship for its Pacific Coast traffic. This was the Nebraska, and she had sailed early in January, 1868, on her long maiden voyage around Cape Horn. Muir found that the Santiago de Cuba was scheduled to sail for Aspinwall on the 6th of March, and that her passengers would connect with the northward-bound Nebraska on the Pacific side of the Isthmus of Panama in about ten days. The records show that the Santiago de Cuba, not a large boat, carried on this trip four hundred passengers and five hundred and forty-two tons of freight. So overcrowded was the vessel that many passengers had to sleep on the decks. Nevertheless Muir engaged steerage passage on this boat and made connections with the Nebraska.

Over his experiences on shipboard, both to Panama and from there to California, Muir has drawn the veil of oblivion. He rarely referred to them, even in the circle of his own family, and then only to indicate that they were such as one would have to forget in order to retain one's faith in humanity.

But of the trip across the Isthmus he wrote, "Never shall I forget the glorious flora, especially for the first fifteen or twenty miles along the Chagres River. The riotous exuberance of great forest trees, glowing in purple, red, and yellow flowers, far surpassed anything I had ever seen, especially of flowering trees, either in Florida or Cuba. I gazed from the car platform enchanted. I fairly cried for joy and hoped that sometime I should be able to return and enjoy and study this most glorious of forests to my heart's content."

CHAPTER VI

FOLLOWING THE SHEEP

1868–1869

THE Nebraska arrived at San Francisco, March 27th, and Muir lost no time there after he set foot on land. To his friends he was accustomed to relate, with touches of humor, how he met on the street, the morning after debarkation, a man with a kit of carpenter's tools on his shoulders. When he inquired of him "the nearest way out of town to the wild part of the State," the man set down his tools in evident astonishment and asked, "Where do you wish to go?" "Anywhere that's wild," was Muir's reply, and he was directed to the Oakland Ferry with the remark that that would be as good a way out of town as any.

On shipboard Muir had made the acquaintanceship of a young Englishman by the name of Chilwell, "a most amusing and faithful companion," who eagerly embraced the opportunity to visit Yosemite Valley with him. In those days the usual route to Yosemite was by river steamer to Stockton, thence by stage to Coulterville or Mariposa, and the remainder of the

way over the mountains on horseback. But Muir disdained this "orthodox route," for "we had plenty of time," he said, "and proposed drifting leisurely mountainward by the Santa Clara Valley, Pacheco Pass, and the San Joaquin Valley, and thence to Yosemite by any road that we chanced to find; enjoying the flowers and light; 'camping out' in our blankets wherever overtaken by night and paying very little compliance to roads or times."

In his autobiographical manuscript Muir passes in a few sentences over the first part of this trip, intending according to his penciled directions to fill in from a description already written. This must refer to the detailed narrative published in "Old and New" in 1872, from which we excerpt the paragraphs descriptive of his walk as far as the top of the Pacheco Pass.

We crossed the bay by the Oakland Ferry and proceeded up the Santa Clara valley to San José. This is one of the most fertile of the many small valleys of the coast; its rich bottoms are filled with wheat-fields, and orchards, and vineyards, and alfalfa meadows.

It was now spring-time, and the weather was the best we ever enjoyed. Larks and streams sang everywhere; the sky was cloudless, and the whole valley was a lake of light. The atmosphere was spicy and exhilarating, my companion acknowledg-

ing over his national prejudices that it was the best he ever breathed — more deliciously fragrant than that which streamed over the hawthorn hedges of England. This San José sky was not simply pure and bright, and mixed with plenty of well-tempered sunshine, but it possessed a positive flavor, a *taste* that thrilled throughout every tissue of the body. Every inspiration yielded a well-defined piece of pleasure that awakened thousands of new palates everywhere. Both my companion and myself had lived on common air for nearly thirty years, and never before this discovered that our bodies contained such multitudes of palates, or that this mortal flesh, so little valued by philosophers and teachers, was possessed of so vast a capacity for happiness.

We were new creatures, born again; and truly not until this time were we fairly conscious that we were born at all. Never more, thought I as we strode forward at faster speed, never more shall I sentimentalize about getting free from the flesh, for it is steeped like a sponge in immortal pleasure.

The foothills of the valley are in near view all the way to Gilroy, those of the Monte Diablo range on our left, those of Santa Cruz on our right; they are smooth and flowing, and come down to the bottom levels in curves of most surpassing beauty. They are covered with flowers growing close together in cloud-shaped companies, acres and hillsides in size, white, purple, and yellow, separate, yet blending like the hills upon which they grow. . . .

The Pacheco Pass was scarcely less enchanting than the valley. It resounded with crystal waters, and the loud shouts of thousands of quails. The

California quail is a little larger than the Bob White; not quite so plump in form. The male has a tall, slender crest, wider at top than bottom, which he can hold straight up, or droop backward on his neck, or forward over his bill, at pleasure; and, instead of "Bob White," he shouts "pe-check-a," bearing down with a stiff, obstinate emphasis on "check." Through a considerable portion of the pass the road bends and mazes along the groves of a stream, or down in its pebbly bed, leading one now deep in the shadows of dogwoods and alders, then out in the light, through dry chaparral, over green carex meadows banked with violets and ferns, and dry, plantless flood-beds of gravel and sand.

We found ferns in abundance in the pass. . . . Also in this rich garden pass we gathered many fine grasses and carices, and brilliant penstemons, azure and scarlet, and mints and lilies, and scores of others, strangers to us, but beautiful and pure as ever enjoyed the sun or shade of a mountain home.

At this point Muir's unpublished memoirs resume the thread of the narrative as follows:

At the top of the Pass I obtained my first view of the San Joaquin plain and the glorious Sierra Nevada. Looking down from a height of fifteen hundred feet, there, extending north and south as far as I could see lay a vast level flower garden, smooth and level like a lake of gold — the floweriest part of the world I had yet seen. From the eastern margin of the golden plain arose the white Sierra. At the base ran a belt of gently sloping purplish foothills lightly dotted with oaks, above that a broad dark zone of coniferous forests, and above

this forest zone arose the lofty mountain peaks, clad in snow. The atmosphere was so clear that although the nearest of the mountain peaks on the axis of the range were at a distance of more than one hundred and fifty miles, they seemed to be at just the right distance to be seen broadly in their relationship to one another, marshaled in glorious ranks and groups, their snowy robes so smooth and bright that it seemed impossible for a man to walk across the open folds without being seen, even at this distance. Perhaps more than three hundred miles of the range was comprehended in this one view.

Descending the pass and wading out into the bed of golden compositæ five hundred miles long by forty or fifty wide, I found that the average depth of the vegetation was over knee-deep, and the flowers were so crowded together that in walking through the midst of them and over them more than a hundred were pressed down beneath the foot at every step. The yellow of these compositæ, both of the ray and disc flowers, is extremely deep and rich and bossy, and exceeds the purple of all the others in superficial quantity forty or fifty times their whole amount. But to an observer who first looks downward, then takes a wider and wider view, the yellow gradually fades, and purple predominates, because nearly all of the purple flowers are taller. In depth, the purple stratum is about ten or twelve inches, the yellow seven or eight, and down in the shade, out of sight, is another stratum of purple, one inch in depth, for the ground forests of mosses are there, with purple stems, and purple cups. The color-beauty of these mosses, at least in the mass, was not made for human eyes, nor for the wild horses that

inhabit these plains, nor the antelopes, but perhaps the little creatures enjoy their own beauty, and perhaps the insects that dwell in these forests and climb their shining columns enjoy it. But we know that however faint, and however shaded, no part of it is lost, for all color is received into the eyes of God.

Crossing this greatest of flower gardens and the San Joaquin River at Hill's Ferry, we followed the Merced River, which I knew drained Yosemite Valley, and ascended the foothills from Snelling by way of Coulterville. We had several accidents and adventures. At the little mining town of Coulterville we bought flour and tea and made inquiries about roads and trails, and the forests we would have to pass through. The storekeeper, an Italian, took kindly pains to tell the pair of wandering wayfarers, new arrived in California, that the winter had been a very severe one, that in some places the Yosemite trail was still buried in snow eight or ten feet deep, and therefore we would have to wait at least a month before we could possibly get into the great valley, for we would surely get lost should we attempt to go on. As to the forests, the trees, he said, were very large; some of the pines eight or ten feet in diameter.

In reply I told him that it would be delightful to see snow ten feet deep and trees ten feet thick, even if lost, but I never got lost in wild woods. "Well," said he, "go, if you must, but I have warned you; and anyhow you must have a gun, for there are bears in the mountains, but you must not shoot at them unless they come for you and are very, very close up." So at last, at Mr. Chilwell's anxious suggestion, we bought an old army musket, with a few

pounds of quail shot and large buckshot, good, as the merchant assured us, for either birds or bears.

Our bill of fare in camps was simple — tea and cakes, the latter made from flour without leaven and toasted on the coals — and of course we shunned hotels in the valley, seldom indulging even in crackers, as being too expensive. Chilwell, being an Englishman, loudly lamented being compelled to live on so light a diet, flour and water, as he expressed it, and hungered for flesh; therefore he made desperate efforts to shoot something to eat, particularly quails and grouse, but he was invariably unsuccessful and declared the gun was worthless. I told him I thought that it was good enough if properly loaded and aimed, though perhaps sighted too high, and promised to show him at the first opportunity how to load and shoot.

Many of the herbaceous plants of the flowing foothills were the same as those of the plain and had already gone to seed and withered. But at a height of one thousand feet or so we found many of the lily family blooming in all their glory, the Calochortus especially, a charming genus like European tulips, but finer, and many species of two new shrubs especially, Ceanothus and Adenostoma. The oaks, beautiful trees with blue foliage and white bark, forming open groves, gave a fine park effect. Higher, we met the first of the pines, with long gray foliage, large stout cones, and wide-spreading heads like palms. Then yellow pines, growing gradually more abundant as we ascended. At Bower Cave on the north fork of the Merced the streams were fringed with willows and azalea, ferns, flowering dogwood,

etc. Here, too, we enjoyed the strange beauty of the Cave in a limestone hill.

At Deer Flat the wagon-road ended in a trail which we traced up the side of the dividing ridge parallel to the Merced and Tuolumne to Crane Flat, lying at a height of six thousand feet, where we found a noble forest of sugar pine, silver fir, libocedrus, Douglas spruce, the first of the noble Sierra forests, the noblest coniferous forests in the world, towering in all their unspoiled beauty and grandeur around a sunny, gently sloping meadow. Here, too, we got into the heavy winter snow — a fine change from the burning foothills and plains.

Some mountaineer had tried to establish a claim to the Flat by building a little cabin of sugar pine shakes, and though we had arrived early in the afternoon I decided to camp here for the night as the trail was buried in the snow which was about six feet deep, and I wanted to examine the topography and plan our course. Chilwell cleared away the snow from the door and floor of the cabin, and made a bed in it of boughs of fernlike silver fir, though I urged the same sort of bed made under the trees on the snow. But he had the house habit.

After camp arrangements were made he reminded me of my promise about the gun, hoping eagerly for improvement of our bill of fare, however slight. Accordingly I loaded the gun, paced off thirty yards from the cabin, or shanty, and told Mr. Chilwell to pin a piece of paper on the wall and see if I could not put shot into it and prove the gun's worth. So he pinned a piece of an envelope on the shanty wall and vanished around the corner, calling out, "Fire away."

I supposed that he had gone some distance back of the cabin, but instead he went inside of it and stood up against the mark that he had himself placed on the wall, and as the shake wall of soft sugar pine was only about half an inch thick, the shot passed through it and into his shoulder. He came rushing out, with his hand on his shoulder, crying in great concern, "You've shot *me*, you've shot *me*, Scottie." The weather being cold, he fortunately had on three coats and as many shirts. One of the coats was a heavy English overcoat. I discovered that the shot had passed through all this clothing and into his shoulder, and the embedded pellets had to be picked out with the point of a penknife. I asked him how he could be so foolish as to stand opposite the mark. "Because," he replied, "I never imagined the blank gun would shoot through the side of the 'ouse."

We found our way easily enough over the deep snow, guided by the topography, and discovered the trail on the brow of the valley just as the Bridal Veil came in sight. I didn't know that it was one of the famous falls I had read about, and calling Chilwell's attention to it I said, "See that dainty little fall over there. I should like to camp at the foot of it to see the ferns and lilies that may be there. It looks small from here, only about fifteen or twenty feet, but it may be sixty or seventy." So little did we then know of Yosemite magnitudes!

After spending eight or ten days in visiting the falls and the high points of view around the walls, making sketches, collecting flowers and ferns, etc., we decided to make the return trip by way of Wawona, then owned by Galen Clark, the Yosemite

pioneer. The night before the start was made on the return trip we camped near the Bridal Veil Meadows, where, as we lay eating our suppers by the light of the camp-fire, we were visited by a brown bear. We heard him approaching by the heavy crackling of twigs. Chilwell, in alarm, after listening a while, said, "I see it! I see it! It's a bear, a grizzly! Where is the gun? You take the gun and shoot him — you can shoot best." But the gun had only a charge of birdshot in it; therefore, while the bear stood on the opposite side of the fire, at a distance of probably twenty-five or thirty feet, I hastily loaded in a lot of buckshot. The buckshot was too large to chamber and therefore it made a zigzag charge on top of the birdshot charge, the two charges occupying about half of the barrel. Thus armed, the gun held at rest pointed at the bear, we sat hushed and motionless, according to instructions from the man who sold the gun, solemnly waiting and watching, as full of fear as the musket of shot. Finally, after sniffing and whining for his supper what seemed to us a long time, the young inexperienced beast walked off. We were much afraid of his return to attack us. We did not then know that bears never attack sleeping campers, and dreading another visit we kept awake on guard most of the night.

Like the Coulterville trail all the high-lying part of the Mariposa trail was deeply snow-buried, but we found our way without the slightest trouble, steering by the topography in a general way along the brow of the cañon of the south fork of the Merced River, and in a day or two reached Wawona. Here we replenished our little flour sack and Mr. Clark gave us a piece of bear meat.

We then pushed eagerly on up the Wawona ridge through a magnificent sugar pine forest and into the far-famed Mariposa Sequoia Grove. The sun was down when we entered the Grove, but we soon had a good fire and at supper that night we tasted bear meat for the first time. My flesh-hungry companion ate it eagerly, though to me it seemed so rank and oily that I was unable to swallow a single morsel.

After supper we replenished the fire and gazed enchanted at the vividly illumined brown boles of the giants towering about us, while the stars sparkled in wonderful beauty above their huge domed heads. We camped here long uncounted days, wandering about from tree to tree, taking no note of time. The longer we gazed the more we admired not only their colossal size, but their majestic beauty and dignity. Greatest of trees, greatest of living things, their noble domes poised in unchanging repose seemed to belong to the sky, while the great firs and pines about them looked like mere latter-day saplings.

While we camped in the Mariposa Grove, the abundance of bear tracks caused Mr. Chilwell no little alarm, and he proposed that we load the gun properly with buckshot and without any useless birdshot; but there was no means of drawing the charge — it had to be shot off. The recoil was so great that it bruised his shoulder and sent him spinning like a top. Casting down the miserable, kicking, bad-luck musket among the Sequoia cones and branches that littered the ground, he stripped and examined his unfortunate shoulder and, in painful indignation and wrath, found it black and blue and

more seriously hurt by the bruising recoil blow than it was by the shot at Crane Flat.

When we got down to the hot San Joaquin plain at Snelling the grain fields were nearly ready for the reaper, and we began to inquire for a job to replenish our remaining stock of money which was now very small, though we had not spent much; the grand royal trip of more than a month in the Yosemite region having cost us only about three dollars each. At our last camp, in a bed of cobble-stones on the Merced River bottom, Mr. Chilwell was more and more eagerly hungering for meat. He tried to shoot one of the jack-rabbits cantering around us, but was unable to hit any of them. I told him, when he begged me to take the gun, that I would shoot one for him if he would drive it up to the camp. He ran and shooed and threw cobble-stones without getting any of them up within shooting distance as I took good care to warn the poor beasts by making myself and the gun conspicuous. At last discovering the humor of the thing he shouted: "I say, Scottie, this makes me think of a picture I once saw in Punch — game-keepers driving partridges to be shot by a simpleton Cockney."

Then one of those curious burrowing owls alighted on the top of a fence-post beside us, and I said, "If you are so hungry for flesh why don't you shoot one of those owls?" "Howls," he said in disgust, "are only vermin." I argued that that was mere prejudice and custom, and that if stewed in a pot it would make good soup, and the flesh, too, that he hungered for, might also be found to be fairly good, but that if he didn't care for it, I didn't.

I finally pictured the flavor of the soup so tempt-

ingly that with watering lips he consented to try it, and the poor owl was shot. When he came to dress it the pitiful little red carcass seemed so worthless a morsel that he was tempted to throw it away, but I said, "No; now that you have it ready for the pot, boil it and at least enjoy the soup." So it was boiled in the teapot and bravely devoured, though he insisted that he did not like the flavor of either the soup or the meat. He charged me, saying: "Now, Scottie, if you go to England with me to see my folks, after our fortunes are made, don't you tell them as 'ow we 'ad a howl for supper." He was always trying to persuade me to go to England with him.

Next day we got a job in a harvest field at Hopeton and were seated at a table once more. Mr. Chilwell never tired of describing the meanness and misery of so pure a vegetable diet as was ours on the Yosemite trip. "Just think of it," said he, "we lived a whole month on flour and water!" He ate so many hot biscuits at that table, and so much beans and boiled pork, that he was sick for three or four days afterwards, a trick the despised Yosemite diet never played him.

This Yosemite trip only made me hungry for another far longer and farther reaching, and I determined to set out again as soon as I had earned a little money to get near views of the mountains in all their snowy grandeur, and study the wonderful forests, the noblest of their kind I had ever seen — sugar pines eight and nine feet in diameter, with cones nearly two feet long, silver firs more than two hundred feet in height, Douglas spruce and libocedrus, and the kingly Sequoias.

After the harvest was over Mr. Chilwell left me,

but I remained with Mr. Egleston several months to break mustang horses; then ran a ferry boat at Merced Falls for travel between Stockton and Mariposa. That same fall I made a lot of money sheep-shearing, and after the shearing was over one of the sheep-men of the neighborhood, Mr. John Connel, nicknamed Smoky Jack, begged me to take care of one of his bands of sheep, because the then present shepherd was about to quit. He offered thirty dollars a month and board and assured me that it would be a "foin aisy job."

I said that I didn't know anything about sheep, except the shearing of them, didn't know the range, and that his flock would probably be scattered over the plains and lost; but he said he would risk me, that "the sheep would show me the range, and all would go smooth and aisy." At length, considering that, being out every day, a fine opportunity would be offered to watch the growth of the flowery vegetation, and to study the birds and beasts, insects, weather, etc., I dared the job, and sure enough, as my employer said, the sheep soon showed me their range, leading me a wild chase in their search for grass over the dry sun-beaten plains.

Smoky Jack was known far and wide, and I soon learned that he was a queer character. Unmarried, living alone, playing the game of money making, he had already become sheep-rich — the owner of three or four bands, as the flocks are called. He had commenced his career as a sheep-man when he was poor, with only a score or two of coarse-wooled ewes, which he herded himself and faithfully followed and improved until they had multiplied into thousands.

He lived mostly on beans. In the morning after his bean breakfast he filled his pockets from the pot with dripping beans for luncheon, which he ate in handfuls as he followed the flock. His overalls and boots soon, of course, became thoroughly saturated, and instead of wearing thin, wore thicker and stouter, and by sitting down to rest from time to time, parts of all the vegetation, leaves, petals, etc., were embedded in them, together with wool fibers, butterfly wings, mica crystals, fragments of nearly everything that part of the world contained — rubbed in, embedded and coarsely stratified, so that these wonderful garments grew to have a rich geological and biological significance, like those of Mr. Delaney's shepherd.

Replying to my inquiry where the sheep were, he directed me to follow the road between French Bar and Snelling four or five miles, and "when you see a cabin on a little hill, that's the place." I found the place, and a queer place it proved to be. The shepherd whom I was to relieve hailed me with delight and within a few minutes of my arrival set off, exulting in his freedom. I begged him to stay until morning and show me the range, but this he refused, saying that it was quite unnecessary for him to show me the range; all I had to do was simply to let down the corral bars and the starving sheep would soon explain and explore the range.

Left alone, I examined the dismal little hut with dismay. A Dutch oven, frying-pan, and a few tin cups lay on the floor; a rickety stool and a bedstead, with a tick made of a wool sack, stuffed with straw and castoff overalls left by shearers, constituted the furniture. I went outside, looking for a piece of

clean ground to lie down on, but no such ground was to be found. Every yard of it was strewn with some sort of sheep camp detritus, bits of shriveled woolly skin, bacon rinds, bones, horns and skulls mixed with all sorts of mysterious compound unclean rubbish! I therefore had to go back into the shanty and spread my blankets on the dirt floor as the least dangerous part of the establishment.

Next morning, by the time I had fried some pancakes and made a cup of tea, the sunbeams were streaming through the wide vertical seams of the shanty wall, and I made haste to open the corral. The sheep were crowding around the gate, and as soon as it was opened, poured forth like a boisterous uncontrollable flood, and soon the whole flock was so widely outspread and scattered over the plain, it seemed impossible that the mad starving creatures could ever be got together again. I ran around from side to side, headed the leaders off again and again, and did my best to confine the size of the flock to an area of a square mile or so.

About noon, to my delight and surprise, they lay down to rest and allowed me to do the same for an hour or so. Then they again scattered, but not so far nor so wildly, and I was still more surprised about half an hour before sundown, while I was wondering how I could ever get them driven back into the corral, to see them gather of their own accord into long parallel files, across Dry Creek on the bank of which the corral stood, and pour back into the corral and quietly lie down. This ended my first day of sheep-herding.

After the winter rains had set in, and the grass had grown to a height of three or four inches, herd-

ing became easy, for they quietly filled themselves; but at this time, just before the rain, when not a green leaf is to be seen, when the dead summer vegetation is parched and crumpled into dust and fragments of stems, the sheep are always hungry and unmanageable; but when full of green grass the entire flock moves as one mild, bland, contented animal. This year the winter rains did not set in until the middle of December. Then Dry Creek became a full, deep, stately flowing river; every hollow in the hills was flooded, every channel so long dry carried a rushing, gurgling, happy stream.

Being out every day I had the advantage of watching the coming of every species of plant. Mosses and liverworts, no trace of which could be seen when dry and crumpled, now suddenly covered the entire plain with a soft velvet robe of living green. Then, at first one by one, the different species of flowering plants appeared, pushing up with marvelous rapidity and bursting into bloom, until all the ground was covered with golden compositæ, interrupted and enriched here and there with charming beds of violets, mints, clover, mariposa tulips, etc.

It was very interesting, too, to watch the awakening and coming to light and life of the many species of ants and other insects after their deathlike sleep during the cold rainy season; and the ground squirrels coming out of their burrows to sun themselves and feed on the fresh vegetation; and to watch the nesting birds and hear them sing — especially the meadow-larks which were in great abundance and sang as if every note was transformed sunshine.

Plovers in great numbers and of several species came to feed with snipes and geese and swans.

It was interesting, too, to watch the long-eared hares, or jack-rabbits as they are called, as they cantered over the flowery plain, or confidingly mingled with the flock. Several times I saw inquisitive sheep interviewing the rabbits as they sat erect, even touching noses and indulging apparently in interesting gossip. My dog was fond of chasing the hares, but they bounded along carelessly, and never were so closely pressed as to be compelled to dive into a burrow. They apparently trusted entirely to their speed of foot; but as soon as a golden eagle came in sight they made for the nearest burrow in terrified haste. Then, feeling safe, they would turn around and look out the door to watch the movements of their enemy.

Occasionally I have seen an eagle alight within a yard or two of the door of a burrow into which a hare had been chased, and observed their gestures while the hare and eagle looked each other in the face for an hour at a time, the eagle apparently hoping that the hare might venture forth. When, however, a hare was surprised at any considerable distance from a burrow, the eagle, in swift pursuit, rapidly overtakes it and strikes it down with his elbow, then wheels around, picks it up and carries it to some bare hilltop to feast at leisure.

By the end of May nearly all of the marvelous vegetation of the plains has gone to seed and is so scorched and sun-dried, it crumbles under foot as though it had literally been cast into an oven. Then most of the flocks are driven into the green pastures of the Sierra. A camp is made on the first favorable

spot commanding a considerable range, and when it is eaten out the camp is moved to higher and higher pastures in succession, following the upward sweep of grassy, flowery summer towards the summit of the Range.

Ever since I had visited Yosemite the previous year I had longed to get back into the Sierra. When the heavy snows were melting in the spring sunshine, opening the way to the summits of the Range, and I was trying to plan a summer's excursion into their midst, wondering how I could possibly carry food to last a whole summer, Mr. Delaney, a neighbor of Smoky Jack's, noticing my love of plants and seeing some of the drawings I had made in my note-books, urged me to go to the mountains with his flock — not to herd the sheep, for the regular shepherd was to take care of them, but simply to see that the shepherd did his duties. He offered to carry my plant press and blankets, allow me to make his mountain camps my headquarters while I was studying the adjacent mountains, and perfect freedom to pursue my studies, and offering to pay me besides, simply to see that the shepherd did not neglect his flock.

Mr. Delaney was an Irishman who was educated at Maynooth College for a Catholic priest, a striking contrast to his so-called "Smoky" neighbor. He was lean and tall, and I naturally nicknamed him Don Quixote. I told him that I did not think I could be of any practical use to him because I did not know the mountains, knew nothing about the habits of sheep in the mountains, and that I feared that in pushing through brush, fording torrents, and in attacks of bears and wolves, the sheep would be

scattered and not half of them ever see the plains again. But he encouraged me by saying that he himself would go to the mountains with the flock, to the first camp, and visit each camp in succession from time to time, bringing letters and fresh provisions, and seeing for himself how his flock was prospering; that the shepherd would do all the herding and that I would be just as free to pursue my studies as if there were no sheep in the question, to sketch and collect plants, and observe the wild animals; but as he could not depend upon his shepherd his fear was that the flock might be neglected, and scattered by bears, and that my services would only be required in cases of accidents of that sort.

I therefore concluded to accept his generous offer. The sheep were counted, the morning the start for the mountains was made, as they passed out of the corral one by one. They numbered two thousand and fifty, and were headed for the mountains. The leaders of the flock had not gone a mile from the home camp before they seemed to understand that they were on their way up to the high green pastures where they had been the year before, and eagerly ran ahead, while Don Quixote, with a rifle on his shoulder, led two pack animals, and the shepherd and an Indian and Chinaman to assist in driving through the foothills, and myself, marched in the rear.

Our first camp after crossing the dusty, brushy foothills, which were scarcely less sunburned than the plains, was made on a tributary of the North Fork of the Merced River at an elevation of about three thousand feet above the sea. Here there were no extensive grassy meadows, but the hills and hol-

lows and recesses of the mountain divide between the Merced and the Tuolumne waters were richly clothed with grass and lupines, while clover of different species and ceanothus bushes furnished pasture in fair abundance for several weeks, while the many waterfalls on the upper branches of the river, the charming lily gardens at the foot of them, and many new plants and animals to sketch and study, afforded endless work according to my own heart.

The sheep were kept here too long; the pasture within two or three miles of the camp was eaten bare, while we waited day after day, more and more anxiously, for the coming of the Don with provisions, and to assist and direct the moving of the camp to higher fresh pasturage. Our own pasturage was also exhausted. We got out of flour, and strange to say, although we had abundance of mutton and tea and sugar, we began to suffer. After going without bread for about a week it was difficult to swallow mutton, and our stomachs became more and more restless. The shepherd tried to calm his rebellious stomach by chewing great quantities of tobacco and swallowing most of the juice, and by making his tea very strong, using a handful for each cup. Strange that in so fertile a wilderness we should suffer distress for the want of a cracker, or a slice of bread, while the Indians of the neighborhood sustained their merry, free lives on clover, pine bark, lupines, fern roots, et cetera, with only now and then a squirrel, deer or bear, badger or coon.

At length the Don came down the long glen, and all our bread woes were ended. He brought with him not only an abundance of provisions, but two men to assist in driving the flock higher. One of

these men was an Indian, and I was interested in watching his behavior while eating, driving, and choosing a place to sleep at night. He kept a separate camp, and how quick his eye was to notice a straggling sheep, and how much better he seemed to understand the intentions and motives of the flock than any of the other assistants.

Our next camp was made on the north side of Yosemite Valley, about a mile back from the top of the wall. Here for six weeks I reveled in the grandeur of Yosemite scenery, sketching from the crown of North Dome, visiting the head of the great Yosemite Fall and making excursions to the eastward to the top of Mount Hoffman and to Lake Tenaya, enjoying the new plants. The greatest charm of our first camp were the lily gardens, *Lilium pardalinum*, with corollas large enough for babies' bonnets. The species around our Yosemite camp was the mountain lily, *L. parvum*, with from one or two to forty or fifty flowers, the magnificent panicles rising to the height of six or seven feet, or even higher.

The principal tree of the forests at an elevation of eight thousand feet is the magnificent silver fir. The tallest that I measured near camp was no less than two hundred and forty feet in height, while with this grandeur and majesty is combined exquisite beauty of foliage and flower and fruit; the branches like sumptuous fern fronds, arranged in regular whorls around the stem, like the leaves of lilies.

From this camp I made the acquaintance on the top of Mount Hoffman of trees I had not seen before — the beautiful mountain hemlock (*Tsuga Mertensiana*) and most graceful in form of all the California conifers, and the curious dwarf pine (*Pinus*

albicaulis) that forms the timber-line. To tell the glories of this magnificent camp-ground would require many a volume.

Here, for the first time, the sheep were attacked by bears in the night and scattered. The morning light showed a heap of dead sheep in the corral, killed by suffocation in piling on top of each other and pressing against the wall of the corral, while only two were carried out of the corral and half of the carcasses eaten. The second day after this attack the corral was again visited, another lot of sheep smothered and one carried off and half devoured. Just after we had succeeded in gathering the scattered flock into one again the Don arrived, and immediately ordered the camp moved, saying that the first robber bear and perhaps others, would visit the camp every night, and that no noisy watching, shooting, or building of fires would be of any avail to stop them. Accordingly, next morning the flock was headed toward the high grassy forests north of the Tuolumne meadows which we reached a few days later, where abundance of the best pasturage was found. Here we stayed until the approach of winter warned the Don to turn the flock toward the lowlands. At this camp I had a glorious time climbing, studying, sketching, pressing new plants, etc. But far from satisfied I determined to return next year and as many other years as opportunities offered or were made.

When we arrived at the home ranch the flock was corraled and counted, and strange to say, every sheep of the two thousand and fifty was accounted for. A few had been killed for mutton, one was killed by the bite of a rattlesnake, one broke its leg

jumping over a rock and had to be killed, one or two were sold to settlers on the way down to the foothills, and so forth, besides those lost by bears.

This was a summer of greatest enjoyment of all that I liked best. I climbed the surrounding mountains; made the acquaintance of many new trees, shrubs, and herbaceous plants, the main forest zones, glacier meadows, gardens and endless falls and cascades. There, too, I made the acquaintance of some of the Mono Indians, who visited our camp while on their annual deer hunt. The whole summer was crowded with the noblest pictures and sculptures and monuments of nature's handiwork. I explored the magnificent group of mountains at the head of the Tuolumne River, crossed the range by the Mono Pass, visited Mono Lake and the range of volcanic cones extending from its southern shore, making excursions from camp into all the surrounding region, sketching, writing notes, pressing plants, tracing the works and ways of the ancient glaciers, and reveling in the glorious life and beauty of the unspoiled new-born wilderness. And when at last the snow drove me out of it I determined to return to it again and again as I was able.

CHAPTER VII

FIRST YOSEMITE YEARS

1869–1870

MUIR'S first excursion into the High Sierra ended in September, 1869. What he saw and experienced during that memorable summer is told vividly, and with infectious enthusiasm, in his journal, later published as "My First Summer in the Sierra." Only one thing there was that marred his joy — the fearful destruction wrought in the forests by the "hoofed locusts" which he was set to guard. Though he did not realize it then, the time was coming when his direct observation of the devastating effect of sheeping in the High Sierra was to become an important factor in his campaign to expel the trampling, devouring hordes from the mountains. But the uppermost impression in his mind, when the summer ended, was after all the Edenic loveliness of the regions he had visited. "I have crossed the Range of Light," so runs the concluding sentence of his journal, "surely the brightest and best of all the Lord has built; and rejoicing in its glory, I gladly, gratefully, hopefully pray I may see it again."

The fulfillment of this desire was not to be long delayed, for the means of accomplishment were in his own power. After spending about eight weeks breaking horses for Pat Delaney, building fences, and running a gang-plow over his broad acres below French Bar, he set out on foot for Yosemite by way of Piño Blanco, Coulterville, and Harding's Mill.

Meanwhile his Madison friends, the Carrs, had, during the summer of 1869, removed to California, where Professor Carr had been appointed to a Professorship in the University of California. They had not seen Muir since 1867 and were at this time urging him to pay them a visit in Oakland. "I thank you most heartily for the very kind invitation you send me," he writes from Delaney's ranch near La Grange under date of November 15, 1869. "I could enjoy a blink of rest in your new home with a relish that only those can know who have suffered solitary banishment for so many years. But I must return to the mountains — to Yosemite. I am told that the winter storms there will not be easily borne, but I am bewitched, enchanted, and to-morrow I must start for the great temple to listen to the winter songs and sermons preached and sung only there."

Mrs. Carr, soon after her arrival in Cali-

fornia, had visited Yosemite, but to her and Muir's great disappointment the letter which was to call him down from the heights, to meet her in the Valley, failed to reach its destination. Muir at this time was still purposing to go on an exploratory trip to South America, a plan in which Mrs. Carr was warmly abetting him. So fully was his mind made up on this point that in a letter to his brother David he allowed himself only about six months more in California, and the prospect of so early a departure to other lands made him determined to spend these months in the mountains.

The proposed South American journey and the spell which the beauty and grandeur of the Sierra Nevada were weaving about him form the subject of a paragraph in a letter written to his sister Sarah during this same summer while encamped "in a spruce grove near the upper end of Yosemite, two miles from the north wall."

> Just think [he writes] of the blessedness of my lot! — have been camped here right in the midst of Yosemite rocks and waters for fifteen days, with nearly all of every day to myself to climb, sketch, write, meditate, and botanize! My foot has pressed no floor but that of the mountains for many a day. I am far from the ways and pursuits of man. I seldom even hear the bleating of our twenty-five hundred sheep. The manifold overwhelming sub-

limities of the Sierra are all in all. I am with Nature in the grandest, most divine of all her earthly dwelling places. . . .

A few months will call upon me to decide to what portion of God's glorious star I will next turn. The sweets of home, the smooth waters of civilized life have attractions for me whose power is increased by time and constant rambling, but I am a captive, I am bound. Love of pure unblemished Nature seems to overmaster and blur out of sight all other objects and considerations. I know that I could under ordinary circumstances accumulate wealth and obtain a fair position in society, and I am arrived at an age that requires that I should choose some definite course for life. But I am sure that the mind of no truant schoolboy is more free and disengaged from all the grave plans and purposes and pursuits of ordinary orthodox life than mine. But I wonder what spirit is conjuring up such sober affairs at this time. I only meant to say a word by way of family greeting. To-morrow I will be among the sublimities of Yosemite and forget that ever a thought of civilization or time-honored proprieties came among my pathless, lawless thoughts and wanderings.

Few persons at this time had braved the storms and isolation of Yosemite during the winter season. The first to do this was James C. Lamon, a Virginian, who came to California from Texas in 1851 and found his way into Yosemite Valley in 1857. Two years later he planted an orchard opposite Half Dome and in 1862 began to make the Valley his residence

both in winter and in summer. In 1864 his example was followed by J. M. Hutchings who brought his wife with him and soon became a sort of *valet de place*. His frame house, situated directly opposite the Yosemite Fall, served also the purpose of a hotel for visitors, and Muir upon his arrival in the Valley naturally sought shelter there. The following letter reflects something of the elation with which he began to explore his new surroundings:

To Mrs. Ezra S. Carr

YOSEMITE, *December 6th*, 1869

DEAR FRIEND MRS. CARR:

I am feasting in the Lord's mountain house, and what pen may write my blessings! I am going to dwell here all winter magnificently "snow-bound." Just think of the grandeur of a mountain winter in Yosemite! Would that you could enjoy it also!

I read your word of pencil upon the bridge below the Nevada, and I thank you for it most devoutly. No one nor all of the Lord's blessings can enable me to exist without friends, and I know that you are a friend indeed.

There is no snow in the Valley. The ground is covered with the brown and yellow leaves of the oak and maple, and their crisping and

rustling make me think of the groves of Madison.

I have been wandering about among the falls and rapids studying the grand instruments of slopes and curves and echoing caves upon which those divine harmonies are played. Only a thin flossy veil sways and bends over Yosemite now, and Pohono, too, is a web of waving mist. New songs are sung, forming parts of the one grand anthem composed and written in "the beginning."

Most of the flowers are dead. Only a few are blooming in summer nooks on the north side rocks. You remember that delightful fernery by the ladders. Well, I discovered a garden meeting of Adiantum far more delicate and luxuriant than those at the ladders. They are in a cove or covelette between the upper and lower Yosemite Falls. They are the most delicate and graceful plant creatures I ever beheld, waving themselves in lines of the most refined of heaven's beauty to the music of the water. The motion of purple dulses in pools left by the tide on the sea coast of Scotland was the only memory that was stirred by these spiritual ferns.

You speak of dying and going to the woods. I am dead, and gone to heaven.

Indian [Tom] comes to the Valley once a

month upon snowshoes. He brings the mail, and so I shall hope to hear from you. Address to Yosemite, via Big Oak Flat, care of Mr. Hutchings.

[JOHN MUIR]

A pleasing picture of his employment, his cabin, and the variety of his nature interests during the next two years is drawn in the following passage from unfinished memoirs:

I had the good fortune to obtain employment from Mr. Hutchings in building a sawmill to cut lumber for cottages, that he wished to build in the spring, from the fallen pines which had been blown down in a violent wind-storm a year or two before my arrival. Thus I secured employment for two years, during all of which time I watched the varying aspect of the glorious Valley, arrayed in its winter robes; the descent from the heights of the booming, out-bounding avalanches like magnificent waterfalls; the coming and going of the noble storms; the varying songs of the falls; the growth of frost crystals on the rocks and leaves and snow; the sunshine sifting through them in rainbow colors; climbing every Sunday to the top of the walls for views of the mountains in glorious array along the summit of the range, etc.

I boarded with Mr. Hutchings' family, but occupied a cabin that I built for myself near the Hutchings' winter home. This cabin, I think, was the handsomest building in the Valley, and the most useful and convenient for a mountaineer. From the

Yosemite Creek, near where it first gathers its beaten waters at the foot of the fall, I dug a small ditch and brought a stream into the cabin, entering at one end and flowing out the other with just current enough to allow it to sing and warble in low, sweet tones, delightful at night while I lay in bed. The floor was made of rough slabs, nicely joined and embedded in the ground. In the spring the common pteris ferns pushed up between the joints of the slabs, two of which, growing slender like climbing ferns on account of the subdued light, I trained on threads up the sides and over my window in front of my writing desk in an ornamental arch. Dainty little tree frogs occasionally climbed the ferns and made fine music in the night, and common frogs came in with the stream and helped to sing with the Hylas and the warbling, tinkling water. My bed was suspended from the rafters and lined with libocedrus plumes, altogether forming a delightful home in the glorious Valley at a cost of only three or four dollars, and I was loath to leave it.

This all too brief account of Muir's earlier Yosemite years we fortunately are able to supplement with the following letters:

To David Gilrye Muir

YOSEMITE, *March 20th*, [1870]

DEAR BROTHER DAVID G.:

Your last of January 6th reached me here in the rocks two weeks ago. I am very heartily glad to learn that your dear wife and wee ones

have escaped from sickness to health. "Ten weeks of fever" — mercy, what intense significance these four words have for me after my Florida experience. We were taught to believe that Providence has special designs to accomplish by the agency of such afflictions. I cannot say that I have the requisite amount of faith to feel the truth of this, but one invariable result of suffering in a love-knit family is to quicken all the powers that develop compact units from clusters of human souls.

I am sitting here in a little shanty made of sugar pine shingles this Sabbath evening. I have not been at church a single time since leaving home. Yet this glorious valley might well be called a church, for every lover of the great Creator who comes within the broad overwhelming influences of the place fails not to worship as he never did before. The glory of the Lord is upon all his works; it is written plainly upon all the fields of every clime, and upon every sky, but here in this place of surpassing glory the Lord has written in capitals. I hope that one day you will see and read with your own eyes.

The only sounds that strike me to-night are the ticking of the clock, the flickering of the fire and the love songs of a host of peaceful frogs that sing out in the meadow up to their

throats in slush, and the deep waving roar of the falls like breakers on a rocky coast.

Your description of the sad quiet and deserted loneliness of home made me sorry, and I felt like returning to the old farm to take care of father and mother myself in their old days, but a little reflection served to show that of all the family, my views and habits and disposition make me the most incapable for the task.

You stirred a happy budget of memories in speaking of my work-shop and laboratory. The happiest days and scrap portions of my life were in that old slant-walled garret and among the smooth creeks that trickled among the sedges of Fountain Lake meadow.

In recalling the mechanical achievements of those early days I remember with satisfaction that the least successful one was that horrid guillotine of a thing for slicing off gophers' heads.

. . . I have completed the sawmill here. It works extremely well. If not a "Kirk and a mill" I have at least made a house and a mill here. . . .

To Sarah Muir Galloway

YOSEMITE VALLEY, *March 24th*, 1870

DEAR SISTER:

A grand event has occurred in our remote snow-bound Valley. Indian Tom has come from the open lower world with the mail. . . .

I wrote you some weeks ago from this place. Tom leaves the Valley to-morrow. I have four letters to write this evening, and it is nearly nine o'clock, so I will not try to write much, but will just say a few things in haste. First of all let me say that though my lot in these years is to wander in foreign lands, my heart is at home. I still feel you all as the chief wealth of my inmost soul and the most necessary elements of my life. What if many a river runs between us. Distance ought not to separate us. Comets that leave their sun for long irregular journeys through the fields of the sky acknowledge as constant and controlling a sympathy with its great center as the nearer, more civilized stars that travel the more proper roads of steady circles. No one reflection gives me so much comfort as the completeness and unity of our family. An apparently short column of years has made men and women of us all, and as I wrote to Daniel, we stand united like a family clump of trees — may the

divine power of family love keep us one. And now do not consider me absent — lost. I have but gone out a little distance to look at the Lord's gardens.

Remember me very warmly to Mrs. Galloway. Tell her that I sympathize very keenly with her in her great affliction. Tell her that my eyes open every day upon the noblest works of God and that I would gladly lend her my own eyes if I could. I think of her very often. I was telling my friend here about her a few nights ago in our little shanty. I do not live "near the Yosemite," but in it — in the very grandest, *warmest* center of it. I wish you could hear the falls to-night — they speak a most glorious language, and I hear them easily through the thin walls of our cabin.

Of course I am glad to hear from you in this solitude, and I thank you for the daisy and the rose leaf and the old legend. I will tell you all about the Yosemite and many other places when I reach home. The surpassing glory of a place like this explains the beauty of that [which] is written in smaller characters, like that of your Mound hill. . . .

To Mrs. Ezra S. Carr

YOSEMITE, *April 5th*, 1870

DEAR MRS. CARR:

I wish you were here to-day, for our rocks are again decked with deep snow. Two days ago a big gray cloud collared Barometer Dome, — the vast looming column of the upper falls was swayed like a shred of loose mist by broken pieces of storm that struck it suddenly, occasionally bending it backwards to the very top of the cliff, making it hang sometimes more than a minute like an inverted bow edged with comets. A cloud upon the Dome and these ever-varying rockings and bendings of the falls are sure storm signs, but yesterday's morning sky was clear, and the sun poured the usual quantity of the balmiest spring sunshine into the blue ether of our Valley gulf. But ere long ragged lumps of cloud began to appear all along the Valley rim, coming gradually into closer ranks, and rising higher like rock additions to the walls. From the top of the cloud-banks, fleecy fingers arched out from both sides and met over the middle of the meadows, gradually thickening and blackening until at night big confident snowflakes began to fall.

We thought that the last snow harvest had been withered and reaped long ago by the

glowing sun, for the bluebirds and robins sang spring, and so also did the bland unsteady winds, and the brown meadow opposite the house was spotted here and there with blue violets. Carex spikes were shooting up through the dead leaves and the cherry and brier rose were unfolding their leaves; and besides these, spring wrote many a sweet mark and word that I cannot tell, but snow fell all the hours of to-day in cold winter earnest, and now at evening there rests upon rocks, trees, and weeds, as full and ripe a harvest of snow flowers as I ever beheld in the stormiest, most opaque days of mid-winter.

[Added later:]

April 13th, [1870]

About twelve inches of snow fell in that last snowstorm. It disappeared as suddenly as it came, snatched away hastily almost before it had time to melt, as if a mistake had been made in allowing it to come here at all. A week of spring days, bright in every hour, without a stain or thought of the storm, came in glorious colors, giving still greater pledges of happy life to every living creature of the spring, but a loud energetic snowstorm possessed every hour of yesterday. Every tree and broken weed bloomed yet once more. All summer distinc-

tions were leveled off. All plants and the very rocks and streams were equally polypetalous.

This morning winter had everything in the Valley. The snow drifted about in the frosty wind like meal and the falls were muffled in thick cheeks of frozen spray. Thus do winter and spring leap into the Valley by turns, each remaining long enough to form a small season or climate of its own, or going and coming squarely in a single day. Whitney says that the bottom has fallen out of the rocks here — which I most devoutly disbelieve. Well, the bottom frequently falls out of these winter clouds and climates. It is seldom that any long transition slant exists between dark and bright days in this narrow world of rocks.

I know that you are enchanted with the April loveliness of your new home. You enjoy the most precious kind of sunshine, and by this time flower patches cover the hills about Oakland like colored clouds. I would like to visit those broad outspread blotches of social flowers that are so characteristic of your hills, but far rather would I see and feel the flowers that are now at Fountain Lake, and the lakes of Madison.

Mrs. Hutchings thought of sending you a bulb of the California lily by mail, but found it too large. She wishes to be remembered to

you. Your Squirrel [Florence Hutchings] is very happy. She is a rare creature.

I hope to see you and the Doctor soon in the Valley. I have a great deal to say to you which I will not try to write. Remember me most cordially to the Doctor and to Allie and all the boys. I am much obliged to you for those botanical notes, etc., and I am,

Ever most cordially yours

JOHN MUIR

To David Gilrye Muir

BALMY SABBATH MORNING IN YOSEMITE
April 10th, [1870]

DEAR BROTHER:

Your geographical, religious and commercial letter was handed me this morning by a little black-eyed witch of a girl [Florence Hutchings], the only one in the Valley. I also received your note of February 8th in due time (that is any time) and I propose to answer them as one, thus accomplishing "twa at a blow"; but I am bewildered by the magnitude and number of the subjects of which they treat. I think that since my pen is perturbed by too big a quantum of levity for Sabbath writing I shall begin with baptism, hoping that my muddy ink and muddy thoughts will settle to the seriousness or anger that naturally belongs to the subject.

I do not like the doctrine of close communion as held by hard-shells, because the whole clumsy structure of the thing rests upon a foundation of coarse-grained dogmatism. Imperious, bolt-upright exclusiveness upon any subject is hateful, but it becomes absolutely hideous and impious in matters of religion, where all men are equally interested. I have no patience at all for the man who complacently wipes his pious lips and waves me away from a simple rite which commemorates the love and sacrifice of Christ, telling me, "Go out from us for you are not of us," and all this not for want of Christian love on my part, or the practice of self-denying virtues in seeking to elevate myself; but simply because in his infallible judgment I am mistaken in the number of quarts of that common liquid we call water which should be made use of in baptism.

I think infant baptism by sprinkling or any other mode is a beautiful and impressive ordinance, and however the Scripture of the thing is interpreted no parent can be doing an unseemly or un-Christian act in dedicating a child to God and taking upon him vows to lead his child in the path that all good people believe in. The baptism of an old sinner is apt to do but little good, but the baptism of an infant, in connection with the religious training

which is supposed to follow it, is likely to do very much good.

I was baptized three times this morning. 1st (according to the old way of dividing the sermon), in balmy sunshine that penetrated to my very soul, warming all the faculties of spirit, as well as the joints and marrow of the body; 2d, in the mysterious rays of beauty that emanate from plant corollas; and 3d, in the spray of the lower Yosemite Falls. My 1st baptism was by immersion, the 2d by pouring, and the 3d by sprinkling. Consequently all Baptists are my brethering, and all will allow that I've "got religion."

[JOHN MUIR]

To Mrs. Ezra S. Carr

YOSEMITE, *May 17th*, [1870]

DEAR FRIEND MRS. CARR:

Our valley is just gushing, throbbing full of open, absorbable beauty, and I feel that I must tell you about it. I am lonely among my enjoyments; the valley is full of visitors, but I have no one to talk to.

The season that is with us now is about what corresponds to full-fledged spring in Wisconsin. The oaks are in full leaf and have shoots long enough to bend over and move in the wind. The good old bracken is waist high already, and

almost all the rock ferns have their outermost fronds unrolled. Spring is in full power and is steadily reaching higher like a shadow, and will soon reach the topmost horizon of rocks. The buds of the poplar opened on the 19th of last month, those of the oaks on the 24th.

May 1st was a fine, hopeful, healthful, cool, bright day, with plenty of the fragrance of new leaves and flowers and of the music of bugs and birds. From the 5th to the 14th was extremely warm, the thermometer averaging about 85° at noon in shade. Craggy banks of cumuli became common about Starr King and the Dome, flowers came in troops, the upper snows melted very fast, raising the falls to their highest pitch of glory. The waters of the Yosemite Fall no longer float softly and downily like hanks of spent rockets, but shoot at once to the bottom with tremendous energy. There is at least ten times the amount of water in the Valley that there was when you were here. In crossing the Valley we had to sail in the boat. The river paid but little attention to its banks, flowing over the meadow in great river-like sheets.

But last Sunday, 15th, was a dark day. The rich streams of heat and light were withheld. The thermometer fell suddenly to 35°; and down among the verdant banks of new

leaves, and groves of half-open ferns, and thick settlements of confident flowers came heavy snow in big blinding flakes, coming down with a steady gait and taking their places gracefully upon shrinking leaves and petals as if they were doing exactly right. The whole day was snowy and stormy like a piece of early winter. Snow fell also on the 16th. A good many of the ferns and delicate flowers are killed.

There are about fifty visitors in the Valley at present. When are you and the Doctor coming? Mr. Hutchings has not yet returned from Washington, so I will be here all summer. I have not heard from you since January.

I had a letter the other day from Professor Butler. He has been glancing and twinkling about among the towns of all the states at a most unsubstantial velocity. . . .

Most cordially yours,

JOHN MUIR

To Mrs. Ezra S. Carr

YOSEMITE, *Sunday, May 29th,* [1870]

DEAR FRIEND:

I received your "apology" two days ago and ran my eyes hastily over it three or four lines at a time to find the place that would say you were coming, but you "fear" that you cannot come at all, and only "hope" that the Doctor

may! But I shall continue to look for you, nevertheless. The Chicago party you speak of were here and away again before your letter arrived. All sorts of human stuff is being poured into our Valley this year, and the blank, fleshly apathy with which most of it comes in contact with the rock and water spirits of the place, is most amazing. I do not wonder that the thought of such people being here makes you "mad"; but, after all, Mrs. Carr, they are about harmless. They climb sprawlingly to their saddles like overgrown frogs pulling themselves up a stream bank through the bent sedges, ride up the Valley with about as much emotion as the horses they ride upon — are comfortable when they have "done it all" and long for the safety and flatness of their proper homes.

In your first letter to the Valley you complain of the desecrating influences of the fashionable hordes about to visit here, and say that you mean to come only once more and "into the beyond." I am pretty sure that you are wrong in saying and feeling so, for the tide of visitors will float slowly about the *bottom* of the Valley as a harmless scum collecting in hotel and saloon eddies, leaving the rocks and falls eloquent as ever and instinct with imperishable beauty and greatness; and recollect that

the top of the Valley is more than half way to real heaven and the Lord has many mansions in the Sierra equal in power and glory to Yosemite, though not quite so open, and I venture to say that you will yet see the Valley many times both in and out of the body.

I am glad you are going to the Coast Mountains to sleep on Diablo — Angelo — ere this. I am sure that you will be lifted above all the effects of your material work. There is a precious natural charm in sleeping under the open starry sky. You will have a very perfect view of the Joaquin Valley, and the snowy pearly wall of the Sierra Nevada. I lay for weeks last summer upon a bed of pine leaves at the edge of a daisy gentian meadow in full view of Mt. Dana.

Mrs. Hutchings says that the lily bulbs were so far advanced in their growth, when she dug some to send you, that they could not be packed without being broken, but I am going to be here all summer and I know where the grandest plantation of these lilies grows, and I will box up as many of them as you wish, together with as many other Yosemite things as you may ask for, and send it out to you before the pack train makes its last trip. I know the Spirea you speak of — it is abundant all around the top of the Valley and the rocks at

Lake Tenaya and reaches almost to the very summit about Mt. Dana. There is also a purple one very abundant on the fringe meadows of Yosemite Creek a mile or two back from the brink of the falls. Of course it will be a source of keen pleasure to me to procure you anything you may desire. I should like to see that grand Agave. I saw some in Cuba, but they did not exceed twenty-five or thirty feet in height.

I have thought of a walk in the wild gardens of Honolulu, and now that you speak of my going there it becomes very probable, as you seem to understand me better than I do myself. I have no square idea about the time I shall get myself away from here. I shall at least stay till you come. I fear that the Agave will be in the spirit world ere that time.

You say that I ought to have such a place as you saw in the gardens of that mile and half of climate. Well, I think those lemon and orange groves would do perhaps to make a living, but for a garden I should not have anything less than a piece of pure nature. I was reading Thoreau's "Maine Woods" a short time ago. As described by him these woods are exactly like those of Canada West. How I long to meet *Linnæa* and *Chiogenes hispidula* once more! I would rather see these two

children of the evergreen woods than all the twenty-seven species of palm that Agassiz met on the Amazon.

These summer days "go on" calmly and evenly. Scarce a mark of the frost and snow of the 15th is visible. The bracken are four or five feet high already. The earliest azaleas have opened and the whole crop of buds is ready to burst. The river does not overflow its banks now, but it is exactly brim full.

The thermometer averages about 75° at noon. We have sunshine every morning from a bright blue sky. Ranges of cumuli appear towards the summits with great regularity every day about eleven o'clock, making a splendid background for the South Dome. In a few hours these clouds disappear and give up the sky to sunny evening.

Mr. Hutchings arrived here from Washington a week ago. There are sixty or seventy visitors here at present. . . .

Ever yours most cordially

J. Muir

When Congress in 1864, by special Act, granted to the State of California the Yosemite Valley, together with a belt of rock and forest a mile in width around the rim, for recreational purposes, no account was taken of

the possible claims of such settlers as J. C. Lamon and J. M. Hutchings. These two endeavored to make good what they regarded as preëmption claims to a section of land in the Valley. Their action resulted in prolonged litigation, but the issue was finally decided against the claimants both by the Supreme Court of the State and the Federal Supreme Court. It was not, however, until 1875 that the Commissioners appointed by the governor found themselves in undisputed control of the Valley. Muir's references to Mr. Hutchings' absences in Washington relate to this matter.

Among Eastern tourists visiting Yosemite Valley in 1870 were Mark Hopkins, then President of Williams College, and Mrs. Robert C. Waterston, the accomplished daughter of Josiah Quincy. "His [Muir's] letters," wrote Mrs. Waterston to a friend, "are poems of great and exquisite beauty — worthy to be written out of a heart whose close communion with nature springs to a perfect love.

> "'Too near to God for doubt or fear,
> He shares the eternal calm.'"

Therese Yelverton and her Yosemite novel, in which John Muir and "Squirrel" — Florence Hutchings — were introduced as leading characters, must be reserved for more extended notice in another connection.

To Mrs. Ezra S. Carr

YOSEMITE, *July 29th*, [1870]

MY DEAR FRIEND MRS. CARR:

I am very, very blessed. The Valley is full of people, but they do not annoy me. I revolve in pathless places and in higher rocks than *the world* and his ribbony wife can reach. Had I not been blunted by hard work in the mill, and crazed by Sabbath raids among the high places of this heaven, I would have written you long since. I have spent every Sabbath for the last two months in the spirit world, screaming among the peaks and outside meadows like a negro Methodist in revival time, and every intervening clump of week days in trying to fix down and assimilate my shapeless harvests of revealed glory into the spirit and into the common earth of my existence, and I am rich — rich beyond measure, not in rectangular blocks of sifted knowledge, or in thin sheets of beauty hung picture-like about "the walls of memory," but in unselected atmospheres of terrestrial glory diffused evenly throughout my whole substance.

Your Brooksian letters I have read with a great deal of interest. They are so full of the spice and poetry of unmingled Nature, and in many places they express my own present

feelings very fully. Quoting from your Forest Glen, "Without anxiety and without expectation all my days come and go *mixed* with such sweetness to every sense," and again, "I don't know anything of time, and but little of space," and "My whole being seemed to open to the sun." All this I do most comprehensively appreciate, and am just beginning to know how fully congenial you are. Would that you could share my mountain enjoyments! In all my wanderings through Nature's beauty, whether it be among the ferns at my cabin door, or in the high meadows and peaks, or amid the spray and music of waterfalls, you are the first to meet me, and I often speak to you as verily present in the flesh.

Last Sabbath I was baptized in the irised foam of the Vernal, and in the divine snow of Nevada, and you were there also and stood in real presence by the sheet of joyous rapids below the bridge.

I am glad to know that McClure and McChesney have told you of our night with upper Yosemite. Oh, what a world is there! I passed, no, I *lived* another night there two weeks ago, entering as far within the veil amid equal glory, together with Mr. Frank Shapleigh of Boston. Mr. Shapleigh is an artist and I like him. He has been here six weeks, and has just

left for home. I told him to see you and to show you his paintings. He is acquainted with Charles Sanderson and Mrs. Waterston. Mrs. Waterston left the Valley before your letter reached me, but one morning about sunrise an old lady came to the mill and asked me if I was the man who was so fond of flowers, and we had a very earnest unceremonious chat about the Valley and about "the beyond." She is made of better stuff than most of the people of that heathen town of Boston, and so also is Shapleigh.

Mrs. Yelverton is here and is going to stop a good while. Mrs. Waterston told her to find me, and we are pretty well acquainted now. She told me the other day that she was going to write a Yosemite novel!! and that "Squirrel" and I were going into it. I was glad to find that she knew you. I have not seen Professor LeConte; perhaps he is stopping at one of the other hotels.

Has Mrs. Rapelye or Mr. Colby told you about our camping in the spruce woods on the south rim of the Valley, and of our walk at daybreak to the top of the Sentinel dome to see the sun rise out of the crown peaks of beyond?

About a week ago at daybreak I started up the mountain near Glacier Point to see Pohono in its upper woods and to study the kind of life

it lived up there. I had a glorious day, and reached my cabin at daylight, by walking all night. And, oh, what a night among those moonshadows! It was one o'clock A.M. when I reached the top of the Cathedral rocks, a most glorious twenty-four hours of life amid nameless peaks and meadows, and the upper cataracts of Pohono! Mr. Hutchings told me next morning that I had done two or three days' climbing in one and that I was shortening my life; but I had a whole lifetime of enjoyment, and I care but little for the arithmetical length of my days. I can hardly realize that I have not yet seen you here. I thank you for sending me so many friends, but I am *waiting* for you.

I am going up the mountain soon to see your lily garden at the top of Indian Cañon. "Let the Pacific islands lie." My love to Allie and all your boys and to the Doctor. Tell him that I have been tracing glaciers in all the principal cañons towards the summit.

Ever thine

JOHN MUIR

The meeting of John Muir and Joseph LeConte in August, 1870, was destined to have literary and scientific consequences not foreseen at the time. It appears clearly from the first of the following letters that Muir was al-

ready aware of the existence of living glaciers in the Sierra Nevada, a fact not then known to any one else and one which he regarded as having an important bearing upon his theory of Yosemite's origin. Discussion of the broader issues involved we must postpone to the chapter on "Persons and Problems."

To Mrs. Ezra S. Carr

[*August 7th*, 1870]

[First part of letter missing.]

. . . To-morrow we set out for the Lyell Glacier in company with LeConte and his boys. We will be with them four or five days when they will go on Monoward for Tahoe. I mean to set some stakes in a dozen glaciers and gather some arithmetic for clothing my thoughts.

I hope you will not allow old H[utchings] or his picture agent Houseworth to so gobble and bewool poor Agassiz that I will not see him. . . .

I will return to the Valley in about a week, if I don't get overdeep in a crevass.

Later. Yours of Monday eve has just come. I am glad your boy is so soon to feel mother, home, and its blessings. I hope to meet [John] Torrey, although I will push iceward as before, but may get back in time. I will enjoy Agassiz, and Tyndall even more. I'm sorry for

poor [Charles Warren] Stoddard; tell him to come. . . .

Ever yours

JOHN MUIR

To Mrs. Ezra S. Carr

YOSEMITE, *August 20th,* [1870]

DEAR FRIEND MRS. CARR:

I have just returned from a ten days' ramble [1] with Professor LeConte and his students in the beyond, and, oh! we have had a most glorious season of terrestrial grace. I do wish I could ramble ten days of equal size in very heaven that I could compare its scenery with that of Bloody Cañon and the Tuolumne Meadows and Lake Tenaya and Mount Dana.

Our first camp after leaving the Valley was at Eagle Point, overlooking the Valley on the north side, from which a much better general view of the Valley and the high crest of the Sierra beyond is obtained than from Inspiration Point. Here we watched the long shadows of sunset upon the living map at our feet and in the later darkness, half silvered by the moon,

[1] Described in Joseph LeConte's privately printed *Journal of Ramblings through the High Sierras of California by the University Excursion Party* (1875). Muir's theory of the glacial origin of Yosemite is mentioned several times in this rare booklet. Reprinted in the Sierra Club *Bulletin*, vol. III, no. 1 (1900).

went far out of human cares and human civilization.

Our next camp was at Lake Tenaya, one of the countless multitudes of starry gems that make this topmost mountain land to sparkle like a sky. After moonrise LeConte and I walked to the lake shore and climbed upon a big sofa-shaped rock that stood, islet-like, a little way out in the shallow water, and here we found another bounteous throne of earthly grace, and I doubt if John in Patmos saw grander visions than we. And you were remembered there and we cordially wished you with us.

Our next sweet home was upon the velvet gentian meadows of the South Tuolumne. Here we feasted upon soda and burnt ashy cakes and stood an hour in a frigid rain with our limbs bent forward like Lombardy poplars in a gale, but ere sunset the black cloud departed, our spines were straightened at a glowing fire, we forgot the cold and all about half raw mutton and alkaline cakes. The grossest of our earthly coils was shaken off, and ere the last slant sunbeams left the dripping meadow and the spirey mountain peaks we were again in the third alpine heaven and saw and heard things equal in glory to the purest and best of Yosemite itself.

Our next camp was beneath a big gray rock at the foot of Mount Dana. Here we had another rainstorm, which drove us beneath our rock where we lay in complicated confusion, our forty limbs woven into a knotty piece of tissue compact as felt.

Next day we worshiped upon high places on the brown cone of Dana, and returned to our rock. Next day walked among the flowers and cascades of Bloody Cañon, and camped at the lake. Rode next day to the volcanic cone nearest to the lake and bade farewell to the party and climbed to the highest crater in the whole range south of the Mono Lake. Well, I shall not try to tell you anything, as it is unnecessary. Professor LeConte, whose company I enjoyed exceedingly, will tell you about our camp meeting on the Tenaya rock.

I will send you a few choice mountain plant children by Mrs. Yelverton. If there is anything in particular that you want, let me know. Mrs. Yelverton will not leave the Valley for some weeks, and you have time to write.

I am ever your friend

JOHN MUIR

The two following letters relate in part to an American colonization scheme promoted by a Mr. A. D. Piper, of San Francisco, who is said

to have received from the Brazilian and Peruvian governments a concession for the navigation of the waters of the upper Amazon, together with a grant of millions of acres on the Purus in the Department of Beni. One of Mrs. Carr's sons joined the expedition and she was anxious to have Muir go also, holding out to him the prospect of a cheap and comfortable passage to the heart of the Andes and the privilege of "locating" three hundred and twenty-five acres of land anywhere within the grant. Muir was too canny to be inveigled into joining such an expedition. It speedily went to pieces in Brazil, whence Mrs. Carr's son returned seriously broken in health.

To Mrs. Ezra S. Carr

TUOLUMNE RIVER, TWO MILES BELOW
LA GRANGE, *November 4th*, [1870]

DEAR FRIEND MRS. CARR:

Yours of October 2d reached me a few days since. The Amazon and Andes have been in all my thoughts for many years, and I am sure that I shall meet them some day ere I die, or become settled and civilized and useful. I am obliged to you for all of this information. I have studied many paths and plans for the interior of South America, but none so easy and sure ever appeared as this of your letter.

I thought of landing at Guayaquil and crossing the mountains to the Amazon, float to Para, subsisting on berries and quinine, but to steam along the palmy shores with company and comforts is perhaps more practical, though not so pleasant. Hawthorne says that steam spiritualizes travel, but I think that it squarely degrades and materializes travel. However, flies and fevers have to be considered in this case.

I am glad that Ned has gone. The woods of the Purus will be a grand place for the growth of men. It must be that I am going soon, for you have shown me the way. People say that my wanderings are very many and methodless, but they are all known to you in some way before I think of them. You are a prophet in the concerns of my little outside life, and pray, what says the spirit about my final escape from Yosemite? You saw me at these rock altars years ago, and I think I shall remain among them until you take me away.

I reached this place last month by following the Merced out of the Valley and through all its cañons to the plains above Snelling — a most glorious walk. I intended returning to the Valley ere this, but Mr. Delaney, the man with whom I am stopping at present, would not allow me to leave before I had plowed his field, and so I will not be likely to see Yosemite again

before January, when I shall have a grand journey over the snow.

Mrs. Yelverton told me before I started upon my river explorations that she would likely be in Oakland in two weeks, and so I made up a package for you of lily bulbs, cones, ferns, etc., but she wrote me a few days ago that she was still in the Valley.

I find that a portion of my specimens collected in the last two years and left at this place and Hopeton are not very well cared for, and I have concluded to send them to you. I will ship them in a few days by express, and I will be down myself, perhaps, in about a year. If there is anything in these specimens that the Doctor can make use of in his lectures tell him to do so freely, of course.

The purple of these plains and of this whole round sky is very impressively glorious after a year in the deep rocks.

People all throughout this section are beginning to hear of Dr. Carr. He accomplishes a wonderful amount of work. My love to Allie, and to the Doctor, and I am,

Ever most cordially yours

JOHN MUIR

To Mrs. Ezra S. Carr

NEAR LA GRANGE, CALIFORNIA
December 22, [1870]

DEAR MRS. CARR:

It is so long since I have heard from you that I begin to think you have sent a letter to Yosemite. I am feeling lonely again, and require a word from you.

Some time ago Mr. Hutchings wrote me saying that he would require my shingle cabin for his sister, and so I am homeless again. I expected to pass the winter there, writing, sketching, etc., and in making exploratory raids back over the mountains in the snow, but Mr. Hutchings' jumping my nest after expressly promising to keep it for me, has broken my pleasant lot of plans, and I am at work making new ones. Were it not that Mr. Hutchings owes me money and that I have a lot of loose notes and outline sketches to work up I should set out for South America at once. As it is, I shall very likely remain where I am for a few months and return to the mountains in the spring. I wish in particular to trace some of the upper Yosemite streams farther and more carefully than I have yet done, and I *shall* dip yet once more into the fathomless grandeur of the Valley.

I am in comfortable quarters at present, within sight and hearing of the Tuolumne, on a smooth level once the bottom of a shallow lake-like expansion of the river where it leaves the slates.

Evening purple on the mountains seen through an ample gap up the Tuolumne is of terrestrial beauty, the purest and best. The sheet gold of the plain compositæ will soon be lighted in the sun days of spring, deepening and glowing yet brighter as it spreads away over the sphered and fluted rock-waves of this old ocean bed. You must not fail to see the April gold of the Joaquin.

I send herewith a letter to Mrs. Yelverton in your care, as you will be likely to know where she is. I have just received a letter which she left for me at Snelling, giving an account [1] of her fearful perils in the snow. It seems strange to me that I should not have known and felt her anguish in that terrible night, even at this distance. She told me that I ought to wait and guide her out, and I feel a kind of guiltiness in not doing so.

Since writing the above yours of November 19th is received, directed to the "Tuolumne River, etc." You are "glad that I am kindly

[1] Cf. "Summer with a Countess," by Mary Viola Lawrence in *The Overland Monthly*, November, 1871.

disposed towards South America, *but* a year is a long time," etc. *But* to me a Yosemite year is a very little measure of time, or rather, a measureless and formless mass of time which can in no manner be geometrically or arithmetically dealt with. *But,* Mrs. Carr, why do you wish to cut me from California and graft me among the groves of the Purus? Please write the reason. This Pacific sunshine is hard to leave. If souls are allowed to go a-rapping and visiting where they please I think that, unbodied, I will be found wallowing in California light.

If the bulbs were lost I will procure some more for you, if you do not send me up the Amazon before next fall.

[John Muir]

CHAPTER VIII

YOSEMITE, EMERSON, AND THE SEQUOIAS

When the early winter storms of 1870 stopped Muir's rambles among the peaks he was able to take refuge in his snug den near the foot of the lower Yosemite Fall. Though dispossessed for a time by Mr. Hutchings, as indicated in his December letter from La Grange, he probably passed the greater part of the winter, as well as the following spring and summer, in his attractive sugar pine cabin. There, as the letter of a reminiscent friend reveals, he might of an evening be found under the lamp, beside his cozy fireplace, reading the writings of Alexander von Humboldt, Sir Charles Lyell, John Tyndall, Charles Darwin, and the latest botanical works on trees. Thus the "harvests of revealed glory," gathered on the mountains during the summer months, were further enriched by wide-ranging study during the long winter evenings. "I think of you as far too blessed," writes Mrs. Carr at this time, "to need words from the lower world, and yet I meant to send many and oft repeated greetings to your winter quarters. I think with delight of how the winter home looks, of little brown 'Squirrel' in the

glow of the firelight, of the long walks, and readings, and thinkings — the morning tintings of the rocks, the comforting warmth of the pines and firs."

But the approach of the winter of 1871 found him homeless in dead earnest. There is reason for thinking that Muir's employer, Mr. Hutchings, did not look with favor upon the young Scotchman's growing fame and popularity as an interpreter of the Valley. It was a function which he himself had exercised so long that he had come to regard it as peculiarly his own. What could have been more natural under the circumstances than that Hutchings, having no scientific competence to formulate independent ideas on the origin of the Valley, should make a combination of other men's views and preach it to all comers in opposition to Muir? The latter, too, had found the work of a sawmill operator increasingly irksome. In any case, he left the employ of Hutchings during the summer of 1871, and after the close of the tourist season we find him busy removing his chattels from Hutchings' to Black's Hotel, then the newest of the three hostelries in the Valley. Like Leidig's Hotel, still farther down the stream, it was situated on the south bank of the Merced almost opposite Sentinel Rock.

With this habitational background of John Muir in mind, let us resume the thread of his correspondence after his return to Yosemite from La Grange. The first letter, bearing no date, probably was written toward the end of February, or the beginning of March, 1871, for his statement that many storms had swept over the mountains since he returned to the Valley, shows that he had been there for some time.

To Mrs. Ezra S. Carr

[YOSEMITE, *February or March*, 1871]

MY DEAR FRIEND MRS. CARR:

"The Spirit" has again led me into the wilderness, in opposition to all counter attractions, and I am once more in the glory of Yosemite.

Your very cordial invitation to your home reached me as I was preparing to ascend, and when my whole being was possessed with visions of snowy forests of the pine and spruce, and of mountain spires beyond, pearly and half transparent, reaching into heaven's blue, not purer than themselves.

In company with another young fellow whom I persuaded to walk, I left the plains just as the first gold sheets were being outspread. My first plan was to follow the Tuolumne upward as I had followed the Merced downward, after reaching Hetch Hetchy Valley, which has about

the same altitude as Yosemite, and spending a week or so in sketching and exploring its falls and rocks, crossing the high mountains past the west end of the Hoffman range, and going down into Yosemite by Indian Cañon, passing thus a glorious month with the mountains, with all their snows and crystal brightness, and all the nameless glories of their magnificent winter. But my plan went agley. I lost a week's sleep by the pain of a sore hand, and I became unconfident in my strength when measured against weeks of wading in snow up to the neck. Therefore I reluctantly concluded to push directly for the Valley by Crane's Flat and Tamarack.

Our journey was just a week in length, including one day of rest in the Crane's Flat cabin. Some of our nights were cold, and we were hungry once or twice. We crossed the snow line on the flank of Pilot Peak ridge six or eight miles below Crane's Flat.

From Crane's Flat to the brim of the Valley the snow was about five feet in depth, and as it was not frozen or compacted in any way we of course had a splendid season of wading.

I wish that you could have seen the edge of the snow-cloud which hovered, oh, so soothingly, down to the grand Pilot Peak brows, discharging its heaven-begotten snows with such

unmistakable gentleness and moving, perhaps, with conscious love from pine to pine as if bestowing separate and independent blessings upon each. In a few hours we climbed under and into this glorious storm-cloud. What a harvest of crystal flowers, and what wind songs were gathered from the spirey firs and the long fringy arms of the Lambert pine! We could not see far before us in the storm, which lasted until some time in the night, but as I was familiar with the general map of the mountain we had no difficulty in finding our way.

Crane's Flat cabin was buried, and we had to grope about for the door. After making a fire with some cedar rails I went out to watch the coming on of the darkness, which was most impressively sublime. Next morning was every way the purest creation I ever beheld. The little Flat, spot-like in the massive spiring woods, was in splendid vesture of universal white, upon which the grand forest-edge was minutely repeated and covered with a close sheet of snow flowers.

Some mosses grow luxuriantly upon the dead generations of their own species. The common snow flowers belong to the sky and in storms are blown about like ripe petals in an orchard. They settle on the ground — the bottom of the atmospheric sea — like mud or leaves in a lake,

and upon this soil, this field of broken sky flowers, grows a luxuriant carpet of crystal vegetation complete and ripe in a single night.

I never before knew that these mountain snow plants were so variable and abundant, forming such bushy clumps and thickets and palmy, ferny groves. Wading waist-deep I had fine opportunities for observing them, but they shrink from human breath — not the only flowers which do so. Evidently not made for man! — neither the flowers composing the snow which came drifting down to us broken and dead, nor the more beautiful crystals which vegetate upon them!

A great many storms have come to the mountains since I passed them, and there can hardly be less than ten feet at the altitude of Tamarack and toward the summit still more.

The weather here is balmy now, and the falls are glorious. Three weeks ago the thermometer at sunrise stood at 12°. I have repaired the mill and dam, and the stream is in no danger of drying up and is more dammed than ever.

To-day has been cloudy and rainy. Tissiack and Starr King are grandly dipped in white cloud. I sent you my plants by express. I am sorry that my Yosemite specimens were not with the others. I left a few notes with Mrs. Yelverton when I left the Valley in the fall. I

wish that you would ask her, if you should see her, where she left it, as Mrs. Hutchings does not know. . . .

I have been nearly blind since I crossed the snow. Give my kindest regards to all your homeful, and to my friends. I am

Always yours most cordially

J. M.

The following letter is of special interest because it contains a brief description of the "hang-nest" attached to the west-end gable of the sawmill. The included sketch is the only surviving pictorial record both of the mill and of his retreat. The adventure of which he hesitated to tell his sister had already been described in a letter to Mrs. Carr, but follows here more logically the one to his sister. Both are striking revelations of his nature enthusiasms at this time.

To Sarah Muir Galloway

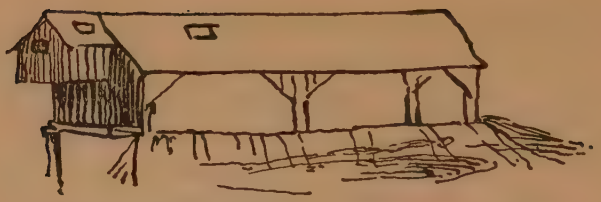
In the Sawmill,
Yosemite Valley, *April 5th*, 1871

Dear Sister Sarah:

This is one of the most surpassingly glorious of Yosemite days, and I have suddenly thought to write you. We have rain and storm. The vast column of the upper Yosemite Falls is swaying

with wonderful ever-changing forms of beauty, and all our mountain walls are wreathed in splendid clouds. In some places a strip of muffy white cloud reaches almost from the bottom of the wall to the top, and just across the meadow the summit of a pine-crested mountain is peering above the clouds like an island in the sky — thus:

It is hard to write here, as the mill jars so much by the stroke of the saw, and the rain drips from the roof, and I have to set the log every few minutes. I am operating this same mill that I made last winter. I like the piney fragrance of the fresh-sawn boards, and I am in constant view of the grandest of all the falls. I sleep in the mill for the sake of hearing the murmuring hush of the water beneath me, and I have a small box-like home fastened beneath the gable of the mill, looking westward down the Valley, where I keep my notes, etc. People call it the hang-nest, because it seems unsupported, thus:



Fortunately, the only people that I dislike are afraid to enter it. The hole in the roof is to command a view of the glorious South Dome, five thousand feet high. There is a corresponding skylight on the other side of the roof which commands a full view of the upper Yosemite Falls, and the window in the end has a view sweeping down the Valley among the pines and cedars and silver firs. The window in the mill-roof to the right is above my head, and I have to look at the stars on calm nights.

Two evenings ago I climbed the mountain to the foot of the upper Yosemite Falls, carrying a piece of bread and a pair of blankets so that I could spend the night on the rock and enjoy the glorious waters, but I got drenched and had to go home, reaching the house at two o'clock in the morning. My wetting was received in a way that I scarcely care to tell. The adventure nearly cost all. I mean to go to-morrow night, but I will not venture behind the column again.

Here are the outlines of a grand old pine and gnarly mossy oak that stand a few steps from

the mill. You liked the flowers. Well, I will get you a violet from the side of the mill-race,

as I go up to shut off the water. Good-night, with a brother's warmest love.

[JOHN MUIR]

To Mrs. Ezra S. Carr

MIDNIGHT, [YOSEMITE, *April* 3, 1871]

Oh, Mrs. Carr, that you could be here to mingle in this night-noon glory! I am in the upper Yosemite Falls and can hardly calm to write, but from my first baptism hours ago, you have been so present that I must try to fix you a written thought.

In the afternoon I came up the mountain here with a blanket and a piece of bread to

spend the night in prayer among the spouts of this fall. But what can I say more than wish again that you might expose your soul to the rays of this heaven?

Silver from the moon illumines this glorious creation which we term "falls," and has laid a magnificent double prismatic bow at its base. The tissue of the fall is delicately filmed on the outside like the substance of spent clouds, and the stars shine dimly through it. In the solid shafted body of the fall is a vast number of passing caves, black and deep, with close white convolving spray for sills and shooting comet sheaves above and down their sides, like lime crystals in a cave. And every atom of the magnificent being, from the thin silvery crest that does not dim the stars to the inner arrowy hardened shafts that strike onward like thunderbolts in sound and energy, all is life and spirit: every bolt and spray feels the hand of God. Oh, the music that is blessing me now! The sun of last week has given the grandest notes of all the yearly anthem.

I said that I was going to stop here until morning and pray a whole blessed night with the falls and the moon, but I am too wet and must go down. An hour or two ago I went out somehow on a little seam that extends along the wall behind the falls. I suppose I was in a

trance, but I can positively say that I was in the body, for it is sorely battered and wetted. As I was gazing past the thin edge of the fall and away beneath the column to the brow of the rock, some heavy splashes of water struck me, driven hard against the wall. Suddenly I was darkened, down came a section of the outside tissue composed of spent comets. I crouched low, holding my breath, and anchored to some angular flakes of rock, took my baptism with moderately good faith.

When I dared to look up after the swaying column admitted light, I pounced behind a piece of ice and the wall which was wedging tight, and I no longer feared being washed off, and steady moonbeams slanting past the arching meteors gave me confidence to escape to this snug place where McChesney and I slept one night, where I have a fire to dry my socks. This rock shelf, extending behind the falls, is about five hundred feet above the base of the fall on the perpendicular rock face.

How little do we know of ourselves, of our profoundest attractions and repulsions, of our spiritual affinities! How interesting does man become considered in his relations to the spirit of this rock and water! How significant does every atom of our world become amid the influences of those beings unseen, spiritual, an-

gelic mountaineers that so throng these pure mansions of crystal foam and purple granite.

I cannot refrain from speaking to this little bush at my side and to the spray drops that come to my paper and to the individual sands of the slopelet I am sitting upon. Ruskin says that the idea of foulness is essentially connected with what he calls dead unorganized matter. How cordially I disbelieve him to-night, and were he to dwell a while among the powers of these mountains he would forget all dictionary differences betwixt the clean and the unclean, and he would lose all memory and meaning of the diabolical sin-begotten term *foulness*.

Well, I must go down. I am disregarding all of the doctors' physiology in sitting here in this universal moisture. Farewell to you, and to all the beings about us. I shall have a glorious walk down the mountain in this thin white light, over the open brows grayed with Selaginella and through the thick black shadow caves in the live oaks, all stuck full of snowy lances of moonlight.

[John Muir]

One of the most memorable experiences of John Muir was the coming of Ralph Waldo Emerson to Yosemite Valley, on May 5, 1871. Muir was thirty-three years old and Emerson

sixty-eight, but the disparity of their years proved no obstacle to the immediate beginning of a warm friendship. The best account of their meeting is contained in a memorandum of after-dinner remarks made by Muir twenty-five years later when Harvard University conferred upon him an honorary M.A. degree.

I was fortunate [he said] in meeting some of the choicest of your Harvard men, and at once recognized them as the best of God's nobles. Emerson, Agassiz, Gray — these men influenced me more than any others. Yes, the most of my years were spent on the wild side of the continent, invisible, in the forests and mountains. These men were the first to find me and hail me as a brother. First of all, and greatest of all, came Emerson. I was then living in Yosemite Valley as a convenient and grand vestibule of the Sierra from which I could make excursions into the adjacent mountains. I had not much money and was then running a mill that I had built to saw fallen timber for cottages.

When he came into the Valley I heard the hotel people saying with solemn emphasis, "Emerson is here." I was excited as I had never been excited before, and my heart throbbed as if an angel direct from heaven had alighted on the Sierran rocks. But so great was my awe and reverence, I did not dare to go to him or speak to him. I hovered on the outside of the crowd of people that were pressing forward to be introduced to him and shaking hands with him. Then I heard that in three or four days he was going away, and in the course of sheer des-

peration I wrote him a note and carried it to his hotel telling him that El Capitan and Tissiack demanded him to stay longer.

The next day he inquired for the writer and was directed to the little sawmill. He came to the mill on horseback attended by Mr. Thayer [1] and inquired for me. I stepped out and said, "I am Mr. Muir." "Then Mr. Muir must have brought his own letter," said Mr. Thayer, and Emerson said, "Why did you not make yourself known last evening? I should have been very glad to have seen you." Then he dismounted and came into the mill. I had a study attached to the gable of the mill, overhanging the stream, into which I invited him, but it was not easy of access, being reached only by a series of sloping planks roughened by slats like a hen ladder; but he bravely climbed up and I showed him my collection of plants and sketches drawn from the surrounding mountains which seemed to interest him greatly, and he asked many questions, pumping unconscionably.

He came again and again, and I saw him every day while he remained in the valley, and on leaving I was invited to accompany him as far as the Mariposa Grove of Big Trees. I said, "I'll go, Mr. Emerson, if you will promise to camp with me in the Grove. I'll build a glorious camp-fire, and the great brown boles of the giant Sequoias will be most impressively lighted up, and the night will be glorious." At this he became enthusiastic like a boy, his sweet perennial smile became still deeper and

[1] James Bradley Thayer, a member of Emerson's party, who, in 1884, published a little volume of reminiscences under the title of *A Western Journey with Mr. Emerson.*

sweeter, and he said, "Yes, yes, we will camp out, camp out"; and so next day we left Yosemite and rode twenty-five miles through the Sierra forests, the noblest on the face of the earth, and he kept me talking all the time, but said little himself. The colossal silver firs, Douglas spruce, Libocedrus and sugar pine, the kings and priests of the conifers of the earth, filled him with awe and delight. When we stopped to eat luncheon he called on different members of the party to tell stories or recite poems, etc., and spoke, as he reclined on the carpet of pine needles, of his student days at Harvard. But when in the afternoon we came to the Wawona Tavern . . .

There the memorandum ends, but the continuation is found in his volume "Our National Parks" at the conclusion of the chapter on "The Forests of the Yosemite":

Early in the afternoon, when we reached Clark's Station, I was surprised to see the party dismount. And when I asked if we were not going up into the grove to camp they said: "No; it would never do to lie out in the night air. Mr. Emerson might take cold; and you know, Mr. Muir, that would be a dreadful thing." In vain I urged, that only in homes and hotels were colds caught, that nobody ever was known to take cold camping in these woods, that there was not a single cough or sneeze in all the Sierra. Then I pictured the big climate-changing, inspiring fire I would make, praised the beauty and fragrance of Sequoia flame, told how the great trees would stand about us transfigured in purple light, while the stars looked down between

the great domes; ending by urging them to come on and make an immortal Emerson night of it. But the house habit was not to be overcome, nor the strange dread of pure night air, though it is only cooled day air with a little dew in it. So the carpet dust and unknowable reeks were preferred. And to think of this being a Boston choice. Sad commentary on culture and the glorious transcendentalism.

Accustomed to reach whatever place I started for, I was going up the mountain alone to camp, and wait the coming of the party next day. But since Emerson was so soon to vanish, I concluded to stop with him. He hardly spoke a word all evening, yet it was a great pleasure simply to be with him, warming in the light of his face as at a fire. In the morning we rode up the trail through a noble forest of pine and fir into the famous Mariposa Grove, and stayed an hour or two, mostly in ordinary tourist fashion, — looking at the biggest giants, measuring them with a tape line, riding through prostrate fire-bored trunks, etc., though Mr. Emerson was alone occasionally, sauntering about as if under a spell. As we walked through a fine group, he quoted, "There were giants in those days," recognizing the antiquity of the race. To commemorate his visit, Mr. Galen Clark, the guardian of the grove, selected the finest of the unnamed trees and requested him to give it a name. He named it Samoset, after the New England sachem, as the best that occurred to him.

The poor bit of measured time was soon spent, and while the saddles were being adjusted I again urged Emerson to stay. "You are yourself a Sequoia," I said. "Stop and get acquainted with

your big brethren." But he was past his prime, and was now a child in the hands of his affectionate but sadly civilized friends, who seemed as full of old-fashioned conformity as of bold intellectual independence. It was the afternoon of the day and the afternoon of his life, and his course was now westward down all the mountains into the sunset. The party mounted and rode away in wondrous contentment, apparently, tracing the trail through ceanothus and dogwood bushes, around the bases of the big trees, up the slope of the sequoia basin, and over the divide. I followed to the edge of the grove. Emerson lingered in the rear of the train, and when he reached the top of the ridge, after all the rest of the party were over and out of sight, he turned his horse, took off his hat and waved me a last good-bye. I felt lonely, so sure had I been that Emerson of all men would be the quickest to see the mountains and sing them. Gazing awhile on the spot where he vanished, I sauntered back into the heart of the grove, made a bed of sequoia plumes and ferns by the side of the stream, gathered a store of firewood, and then walked about until sundown. The birds, robins, thrushes, warblers, etc., that had kept out of sight, came about me, now that all was quiet, and made cheer. After sundown I built a great fire, and as usual had it all to myself. And though lonesome for the first time in these forests, I quickly took heart again — the trees had not gone to Boston, nor the birds; and as I sat by the fire, Emerson was still with me in spirit, though I never again saw him in the flesh.

A few days later there occurred a little

incident in Oakland which is worth telling, for it reveals through Emerson's appreciativeness the impression which Muir had made upon him. The Carrs, then living in a cottage in Oakland, heard one evening during a dense fog a commotion at their back door. Upon investigation they found Ralph Waldo Emerson standing there, with his cloak wrapped closely about him. He had lost his way in the fog and had come up to the back door in his confusion. Urged to come in, he declined, saying that he must at once follow his wife and daughter who had already gone across the ferry to San Francisco. "But I," he added, "could not go through Oakland without coming up here to thank you for that letter to John Muir."

Though now in the closing decade of his life and growing infirm, Emerson sent him an occasional package of books accompanied with words of good cheer, while Muir wrote him enthusiastic letters, and sent fragrant reminders of his Yosemite surroundings. One of his winter recreations was to climb an Incense Cedar, abloom amid the snows of January, gather some of the golden sprays of staminate blossoms, and mail them to his friends. The delicate attention of such an aromatic gift sent to Emerson drew from him the following letter.

Was it the "incense" quality of this cedar which, combined with some playful allusion in Muir's letter, made the flowers "significant" to the sage of Concord?

From Ralph Waldo Emerson

CONCORD, 5 *February*, 1872

MY DEAR MUIR:

Here lie your significant cedar flowers on my table, and in another letter; and I will procrastinate no longer. That singular disease of deferring, which kills all my designs, has left a pair of books brought home to send to you months and months ago, still covering their inches on my cabinet, and the letter and letters which should have accompanied, to utter my thanks and lively remembrance, are either unwritten or lost, so I will send this *peccavi*, as a sign of remorse.

I have been far from unthankful — I have everywhere testified to my friends, who should also be yours, my happiness in finding you — the right man in the right place — in your mountain tabernacle, and have expected when your guardian angel would pronounce that your probation and sequestration in the solitudes and snows had reached their term, and you were to bring your ripe fruits so rare and precious into waiting society.

I trust you have also had, ere this, your own signals from the upper powers. I know that society in the lump, admired at a distance, shrinks and dissolves, when approached, into impracticable or uninteresting individuals, but always with a reserve of a few unspoiled good men, who really give it its halo in the distance. And there are drawbacks also to solitude, who is a sublime mistress, but an intolerable wife. So I pray you to bring to an early close your absolute contracts with any yet unvisited glaciers or volcanoes, roll up your drawings, herbariums and poems, and come to the Atlantic Coast. Here in Cambridge Dr. Gray is at home, and Agassiz will doubtless be, after a month or two, returned from Terra del Fuego — perhaps through San Francisco — or you can come with him. At all events, on your arrival, which I assume as certain, you must find your way to this village, and my house. And when you are tired of our dwarf surroundings, I will show you better people.

With kindest regards

Yours

R. W. Emerson

I send two volumes of collected essays by book-post.

In an undated fragment of a letter to Mrs. Carr, Muir refers to this letter as follows:

He [Emerson] judges me and my loose drifting voyages as kindly as yourself. The compliments of you two are enough to spoil one, but I fancy that he, like you, considers that I am so mountain-tanned and storm-beaten I may bear it. I owe all of my best friends to you. A prophecy in this letter of Emerson's recalled one of yours sent me when growing at the bottom of a mossy maple hollow in the Canada woods, that I would one day be with you, Doctor, and Priest in Yosemite. Emerson prophesies in similar dialect that I will one day go to him and "*better men*" in New England, or something to that effect. I feel like objecting in popular slang that I "can't see it." I shall indeed go gladly to the "Atlantic Coast" as he prophesies, but only to see him and the Glacier ghosts of the North. Runkle wants to make a teacher of me, but I have been too long wild, too befogged to burn well in their patent, high-heated, educational furnaces.

Neither Emerson's nor Muir's anticipations were to be realized. "There remained many a forest to wander through," writes Muir, "many a mountain and glacier to cross, before I was to see his Wachusett and Monadnock, Boston and Concord. It was seventeen years after our parting on the Wawona ridge that I stood beside his grave under a pine tree on the hill above Sleepy Hollow. He had gone to

higher Sierras, and, as I fancied, was again waving his hand in friendly recognition."

Notes of travel made by Sarah Jane Lippincott in 1871–72, under the pen-name of Grace Greenwood, afford a fleeting contemporary glimpse of John Muir as he appeared at this time to a discerning observer in Yosemite.

> Among our visitors in the evening [she writes] was Mr. Muir, the young Scottish mountaineer, student, and enthusiast, who has taken sanctuary in the Yosemite, who stays by the variable Valley with marvelous constancy, who adores her alike in her fast, gay summer life and solemn autumn glories, in her winter cold and stillness, and in the passion of her spring floods and tempests. Not profoundest snows can chill his ardor, not earthquakes can shake his allegiance. Mr. Muir talks with a quiet, quaint humor, and a simple eloquence which are quite delightful. He has a clear blue eye, a firm, free step, and marvelous nerve and endurance. He has the serious air and unconventional ways of a man who has been much with Nature in her grand, solitary places. That tourist is fortunate who can have John Muir for a guide in and about the Valley.

Among the fortunate ones who had in June come to John Muir with a note of introduction from Mrs. Carr was Henry Edwards, by profession an actor, but by avocation an entomologist. "In our lower world Mr. Edwards, who brings you this note," said Mrs. Carr,

"is accounted one of Nature's truest and most devoted disciples. You will take pleasure in introducing him to your heavenly bugs and butterflies, and the winged dragons that hover over those hot springs in 'the beyond.' I do not know how long he proposes to sojourn there, but make the most of the time, for he has the keys to the Kingdom."

Mr. Edwards, familiarly known as "Harry" Edwards among his San Francisco friends, was a rather remarkable man. A finished artist in his profession, he was at the same time the gatherer and possessor of what was then regarded as one of the finest private collections of butterflies and beetles in the world. It was to be expected that such an enthusiast would find a kindred spirit in John Muir, who was prevailed upon to collect some high Sierran butterflies for him, with interesting scientific results.

Your kind letter [he wrote to Muir on August 25, 1871], found me confined to my bed. To-day for the first time in nearly two weeks I was sitting for a little while in my butterfly room when our dear friend Mrs. Carr walked in and brought me your box of butterflies. The sight of them has done me good, and I hope in a day or two I will be quite restored. Do not again ever think that you cannot collect, or that what you do find will be valueless. In the small box which you sent me are *four species*

new to my collection, and *two*[1] *of these are new to science*. I cannot, if I wrote for a week, tell you how interesting they are to me. All the specimens are rare, and are different from those found in the Valley. The two new species are the bright crimson copper one from Cathedral Peak, and one of the small bluish butterflies. There is a pair of greenish yellow ones, very rare and interesting. The species was described from a pair only which were taken by the Geological Survey at the head waters of the Tuolumne River, and strange to say, no others have turned up until you found it now. . . . It is really very singular that the remove of a few miles from the Yosemite should produce species so very different from those of the Valley itself, and at the same time so characteristic in their forms. It is another of the beautiful fields for thought which your wonderful region opens up, and which render your lovely mountains so enchanting to a worshiper of Nature. I hope you will go on to find your truest and best enjoyment among such scenes, and that in the end your labors may meet the reward they deserve, not from your own self-gratification alone, but from the spontaneous recognition of kindred minds.

[1] There is no further confirmation of this statement in records left by Edwards. But Mr. Frank E. Watson, of the American Museum of Natural History, which now owns the Edwards Collection, calls my attention to the fact that in 1881 the butterfly *Thecla Muiri* was named by Henry Edwards after John Muir. In *Papilio*, vol. 1, p. 54 (1881), Edwards writes, "I have named this exquisite little species after my friend John Muir, so well known for his researches into the geology of the Sierra Nevada, who has frequently added rare and interesting species to my collection."

This Edwards letter is only one of many that might be quoted to show how profitably Muir was at this time studying the multiformity of his natural environment. In the absence of authoritative treatises on the plants, insects, and wild life of the region he had to send specimens to classifying specialists for identification, or appeal to his friends about San Francisco Bay, particularly J. B. McChesney, to secure the desired information for him. Most of them thought that he was adhering much too closely to his Sierran wildernesses, and even Mrs. Carr labored to dislodge him from his mountain solitudes and to bring him into what Emerson called "waiting society."

But so intense was his preoccupation with his tasks, so much were they a part of his deepest enjoyments, that her pleadings fell on deaf ears. If anything her remonstrances only served to kindle into flame the poetic fire of his soul. For there was nothing like the provocation of a little aspersion against the worthiness of the objects he was pursuing to bring him to the full stature of his ability as a writer — a vindicator of the objects of his devotion. A letter written under such stimulus is the following:

To Mrs. Ezra S. Carr

YOSEMITE, *December 11th*, [1871]

DEAR MRS. CARR:

We are snowbound, and your letter of November 1st came two days ago. I sympathize with you for the loss of your brown Japanese, but I am glad to know that you found so much of pure human goodness in the life of your scholar. The whole world is enriched, beautified by a stratum — an atmosphere — of Godlike souls, and it is ignorance alone that banks human love into narrow gutter channels and stagnant pools, making it selfish and impure when it should be boundless as air and light, blending with all the world, keeping sight of our impartial Father who is the fountain sun of all the love that is rayed down to earth.

But glaciers, dear friend — ice is only another form of terrestrial love. I am astonished to hear you speak so unbelievingly of God's glorious crystal glaciers. "They are only pests," and you think them wrong in temperature, and they lived in "horrible times" and you don't care to hear about them "only that they made instruments of Yosemite music." You speak heresy for once, and deserve a dip in Methodist Tophet, or Vesuvius at least.

I have just been sending ice to LeConte, and

snow to McChesney and I have nothing left but hailstones for you, but I don't know how to send them — to speak them. You confuse me. You have taught me here and encouraged me to read the mountains. Now you will not listen; next summer you will be converted — you will be iced then.

I have been up Nevada to the top of Lyell and found a living glacier, but you don't want that; and I have been in Hetch Hetchy and the cañon above, and I was going to tell you the beauty there; but it is all ice-born beauty, and too cold for you; and I was going to tell about the making of the South Dome, but ice did that too; and about the hundred lakes that I found, but the ice made them, every one; and I had some groves to speak about — groves of surpassing loveliness in *new* pathless Yosemites, but they all grew upon glacial drift — and I have nothing to send but what is frozen or freezable.

You like the music instruments that glaciers made, but no songs were so grand as those of the glaciers themselves, no falls so lofty as those which poured from brows, and chasmed mountains of pure dark ice. Glaciers *made* the mountains and ground corn for all the flowers, and the forests of silver fir, made smooth paths for human feet until the sacred Sierras have

become the most approachable of mountains. Glaciers came down from heaven, and they were angels with folded wings, white wings of snowy bloom. Locked hand in hand the little spirits did nobly; the primary mountain waves, unvital granite, were soon carved to beauty. They bared the lordly domes and fashioned the clustering spires; smoothed godlike mountain brows, and shaped lake cups for crystal waters; wove myriads of mazy cañons, and spread them out like lace. They remembered the loud-songed rivers and every tinkling rill. The busy snowflakes saw all the coming flowers, and the grand predestined forests. They said, "We will crack this rock for Cassiope where she may sway her tiny urns. Here we'll smooth a plat for green mosses, and round a bank for bryanthus bells." Thus labored the willing flake-souls linked in close congregations of ice, breaking rock food for the pines, as a bird crumbles bread for her young, spiced with dust of garnets and zircons and many a nameless gem; and when food was gathered for the forests and all their elected life, when every rock form was finished, every monument raised, the willing messengers, unwearied, unwasted, heard God's "well done" from heaven calling them back to their homes in the sky.

The following was added later on the same sheet:

January 8th, 1872

DEAR FRIEND:

We are gloriously snowbound. One storm has filled half of last month, and it is snowing again. Would that you could behold its beauty! I half expected another glacial period, but I will not say anything about ice until you become wiser, though I send you a cascade jubilee which you will relish more than anybody else. I have tried to put it in form for publication, and if you can rasp off the rougher angles and wedge in a few slippery words between bad splices, perhaps it may be sufficiently civilized for "Overland" or "Atlantic." But I always felt a chill come over my fingers when a calm place in the storm allowed me to think of it. Also I have been sorry for one of our bears, and I think you will sympathize with me. At least I confide my dead friend to your keeping, and you may print what you like. Heavens! if you only had been here in the flood!

[JOHN MUIR]

The same note of triumphant apology for his choice of the wilderness instead of the city is found in the following unique letter about the Sequoias. They were deepest in his affections,

and under his playful prose-poetry it is not difficult to discover the Muir who in a few years was to arouse the whole nation to the importance of preserving for future generations these greatest and most ancient of all living things. His love for them had in it something personal, and there are those who have overheard him talking to them as to human beings. The original of this letter, written with Sequoia sap, still shines purple after more than half a century. Although it lacks a definite date, internal evidence clearly refers it to his earliest years in Yosemite, perhaps 1870.

To Mrs. Ezra S. Carr

SQUIRRELVILLE, SEQUOIA CO.
Nut Time

DEAR MRS. CARR:

Do behold the King in his glory, King Sequoia! Behold! Behold! seems all I can say. Some time ago I left all for Sequoia and have been and am at his feet, fasting and praying for light, for is he not the greatest light in the woods, in the world? Where are such columns of sunshine, tangible, accessible, terrestrialized? Well may I fast, not from bread, but from business, book-making, duty-going, and other trifles, and great is my reward already for the manly, treely sacrifice. What giant truths

since coming to Gigantea, what magnificent clusters of Sequoic *becauses*. From here I cannot recite you one, for you are down a thousand fathoms deep in dark political quagg, not a burr-length less. But I'm in the woods, woods, woods, and they are in *me-ee-ee*. The King tree and I have sworn eternal love — sworn it without swearing, and I've taken the sacrament with Douglas squirrel, drunk Sequoia wine, Sequoia blood, and with its rosy purple drops I am writing this woody gospel letter.

I never before knew the virtue of Sequoia juice. Seen with sunbeams in it, its color is the most royal of all royal purples. No wonder the Indians instinctively drink it for they know not what. I wish I were so drunk and Sequoical that I could preach the green brown woods to all the juiceless world, descending from this divine wilderness like a John the Baptist, eating Douglas squirrels and wild honey or wild anything, crying, Repent, for the Kingdom of Sequoia is at hand!

There is balm in these leafy Gileads — pungent burrs and living King-juice for all defrauded civilization; for sick grangers and politicians; no need of Salt rivers. Sick or successful, come suck Sequoia and be saved.

Douglas squirrel is so pervaded with rosin and burr juice his flesh can scarce be eaten even

by mountaineers. No wonder he is so charged with magnetism! One of the little lions ran across my feet the other day as I lay resting under a fir, and the effect was a thrill like a battery shock. I would eat him no matter how rosiny for the lightning he holds. I wish I could eat wilder things. Think of the grouse with balsam-scented crop stored with spruce buds, the wild sheep full of glacier meadow grass and daisies azure, and the bear burly and brown as Sequoia, eating pine-burrs and wasps' stings and all; then think of the soft lightningless poultice-like pap reeking upon town tables. No wonder cheeks and legs become flabby and fungoid! I wish I were wilder, and so, bless Sequoia, I will be. There is at least a punky spark in my heart and it may blaze in this autumn gold, fanned by the King. Some of my grandfathers must have been born on a muir-land for there is heather in me, and tinctures of bog juices, that send me to Cassiope, and oozing through all my veins impel me unhaltingly through endless glacier meadows, seemingly the deeper and danker the better.

See Sequoia aspiring in the upper skies, every summit modeled in fine cycloidal curves as if pressed into unseen moulds, every bole warm in the mellow amber sun. How truly godful in mien! I was talking the other day

with a duchess [1] and was struck with the grand bow with which she bade me good-bye and thanked me for the glaciers I gave her, but this forenoon King Sequoia bowed to me down in the grove as I stood gazing, and the highbred gestures of the lady seemed rude by contrast.

There goes Squirrel Douglas, the master-spirit of the tree-top. It has just occurred to me how his belly is buffy brown and his back silver gray. Ever since the first Adam of his race saw trees and burrs, his belly has been rubbing upon buff bark, and his back has been combed with silver needles. Would that some of you, wise — terribly wise — social scientists, might discover some method of living as true to nature as the buff people of the woods, running as free as the winds and waters among the burrs and filbert thickets of these leafy, mothery woods.

The sun is set and the star candles are being lighted to show me and Douglas squirrel to bed. Therefore, my Carr, good-night. You say, "When are you coming down?" Ask the Lord — Lord Sequoia.

[John Muir]

[1] This may be a playful allusion to Thérèse Yelverton who, still claiming her disputed marriage rights, was supposed to have become a Viscountess when her husband succeeded his father as fourth Viscount of Avonmore in October, 1870.

CHAPTER IX

PERSONS AND PROBLEMS

I

It seems impossible that any human being can ever have looked upon Yosemite Valley without raising the question of its origin. Its physical features, sculptured in granite, are so extraordinary that they at once stimulate the imagination to go in quest of the efficient cause. Even the Indians are said to have speculated about the Valley's origin in their legends, and the first white men who entered it in 1851, and encamped on the river-bank opposite El Capitan, immediately occupied themselves with the question in their campfire talk. Although the gold rush began in 1849, it was not until the beginning of the sixties that a systematic geological survey of California was begun. Until then the state was, geologically speaking, an unknown land. In the interest of the growing industrial importance of mining this situation called for remedy, and in 1860 the California Legislature passed an Act to create the office of State Geologist, and by a section of the same Act Josiah D. Whitney was appointed to fill the office.

Whitney had the backing of the leading geologists of his day and was a man of such prominence in his field that he was made Professor of Geology at Harvard in 1865. He gathered around him an able staff of assistants, among whom were William H. Brewer, Charles F. Hoffman, and William M. Gabb. In 1863 Clarence King, also, joined this group as volunteer assistant in geological field-work. During the period from 1860 to 1874 Whitney conducted, with these and other assistants, a topographical, geological, and natural history survey of California, issuing six volumes under the title of "Geological Survey of California" (Cambridge, 1865–70). The first volume, "Geology of California," published in 1865, brought an intimation of the theory Whitney was going to propound on the subject of Yosemite's origin. "The domes," he wrote, "and such masses as that of Mount Broderick, we conceive to have been formed by the process of upheaval, for we can discover nothing about them which looks like the result of ordinary denudation. The Half Dome seems, beyond a doubt, to have been split asunder in the middle, the lost half having gone down in what may truly be said to have been 'the wreck of matter and the crush of worlds.'" In 1869 he published "The Yosemite Guide-Book" and came

to be regarded as the foremost scientific authority on everything pertaining to Yosemite Valley. In this book he set forth his view of the Valley's origin as follows: "We conceive that, during the process of upheaval of the Sierra, or, possibly, at some time after that had taken place, there was at the Yosemite a subsidence of a limited area, marked by lines of 'fault' or fissures crossing each other somewhat nearly at right angles. In other and more simple language, the bottom of the Valley sank down to an unknown depth, owing to its support being withdrawn from underneath during some of those convulsive movements which must have attended the upheaval of so extensive and elevated a chain."

It only excites wonder now that a geologist of Professor Whitney's standing should have propounded a theory so completely at variance with the evidence. Indeed, members of his own corps pointed out that the floor of the Valley was of one piece with the sides and that there was no evidence of fault lines or of fusion. Although Clarence King had observed enough evidence of glaciation in the Valley to venture the opinion that it had once been filled with ice to the depth of at least a thousand feet, Whitney stoutly asserted that "there is no reason to suppose, or at least no proof, that glaciers have

ever occupied the Valley or any portion of it . . . so that this theory [of glacial erosion], based on entire ignorance of the whole subject, may be dropped without wasting any more time upon it." It should be added that Clarence King shared his chief's belief in a cataclysmic origin of the Valley, holding that glaciers only scoured and polished it after it had been formed.[1]

Whitney's "Yosemite Guide-Book" was published by authority of the California Legislature and the views set forth in it, therefore, had official sanction in the eyes of the public. Its author was the first scientist of standing who had reached a definite conclusion after an examination of the geological evidence and he was little inclined to give serious consideration to any view except his own. It required considerable courage, knowledge, and interpretative ability to go up against such a strongly

[1] See original edition of *Mountaineering in the Sierra Nevada*, p. 134 (1872). Several writers have mistakenly made Clarence King the originator of the glacial erosion theory as regards Yosemite. He held no such theory. He did not even precede Muir in the publication of his glacial observations in the chapter entitled "Around Yosemite Walls, "for that chapter, unlike the others, was not published serially in 1871, but appeared for the first time in the above-mentioned volume in 1872. The dates affixed to the chapters of King's book in the Scribner reprint are misleading, for they do not give the date of publication, but the years in which the observations are supposed to have been made.

intrenched and assertive antagonist. But Muir, recognizing the subsidence theory as contrary to his reading of the geological record, accepted the challenge. During the very first year of his residence in the Valley (1869–70) he had become convinced that it had not been formed by a cataclysm, but by long, slow, natural processes in which ice played by far the major part. He never lost an opportunity to discuss the question with interested visitors to the Valley and soon became the recognized and finally victorious opponent of the cataclysmic theory. Since there has been some misapprehension among historical geologists as to the time when Muir began to advocate the glacial erosion theory it seems appropriate to introduce some evidence on this point.

In the autumn of 1871 there issued from The Riverside Press, then Hurd and Houghton, a curious novel entitled "Zanita, a Tale of the Yosemite." Little did the publishers dream that the hero of the tale would one day become one of their most famous authors. Few now remember the writer [1] of the novel, though she

[1] Thérèse Yelverton, Viscountess Avonmore, 1832–81, authoress and plaintiff in the famous suit of Thelwall *vs.* Yelverton which the Court of Common Pleas at Dublin, Ireland, decided in her favor. Though on this occasion (1861) the validity of both her Irish and her Scottish marriage to William Charles Yelverton, fourth Viscount Avonmore, was

was one of the most noted women of her time, and a warm friend of John Muir. The novel's chief interest lies in the fact that the authoress, coming to Yosemite Valley and taking up her abode there for a season in the spring of 1870, appropriated the inhabitants as characters of her tale, and reported their conversations. The names of Oswald and Placida Naunton are only thin disguises for Mr. and Mrs. J. M. Hutchings; Zanita and Cozy are their daughters, Florence and Gertrude; Methley is James C. Lamon, and Professor Brown seems to play for the most part the rôle of Professor Josiah D. Whitney, but with occasional admixtures of Professor Joseph LeConte. The hero of the novel is John Muir himself — under the name of Kenmuir. It is the sobriquet by which she addresses him in extant letters, at the same time identifying herself among the characters by signing herself as "Mrs. Brown."

"Dear Kenmuir," she writes in 1871, . . .

affirmed, the latter finally succeeded in getting a majority of the House of Lords to decide against the marriage (1867). Her maiden name was Maria Teresa Longworth. When her slender fortune had been spent in litigation she supported herself largely by her writings for which she found the materials in wide-ranging travels. Her case was heralded to the entire English-speaking world not only by journalists, but by such plays as Cyrus Redding's *A Wife and not a Wife*, and James Roderick O'Flanagan's novel *Gentle Blood, or The Secret Marriage.*

"'The Daughters of Ahwahnee' will be out in fall. How you will laugh when you see it. You and Cosa are the best survivors, except the everlasting hills and vales." Subsequently, writing from Hong Kong, she complained that the publishers had effaced many passages besides changing the title to "Zanita." In spite of much exaggeration and unreal sentiment, a student of early Yosemite life will find here more than a historical setting. So much is clear from a reference to the book in one of Muir's letters.

Mrs. Yelverton's book [he writes] I have not yet seen. A friend sent me a copy, but it failed to reach hither. I saw some of the manuscript and have some idea of it. She had a little help from me, the use of my notebooks, etc., some of which, I suppose, she may have worked into her descriptions.

The Naunton family is the Hutchings family. The name Zanita is a fragment of the word manzanita, the Spanish name of a very remarkable California shrub. "Zanita" is Floy Hutchings,[1] a smart and handsome and mischievous Topsy that can scarce be overdrawn. . . . She is about seven or eight years old. Her sister Cosa, as we call her (I have forgotten what Mrs. Yelverton calls her), is more beautiful far in body and mind, a very precious darling of a child. Mrs. Naunton or Hutchings, was

[1] Florence Hutchings was the first white child born in Yosemite Valley (August 23, 1864). She died in 1881, was buried in the Valley, and Mount Florence was named for her.

always kind to me, but Mr. Naunton is a very different character in reality, whatever Mrs. Yelverton made of him.

As for Kenmuir, I don't think she knew enough of wild nature to pen him well, but I have often worn shirts, soiled, ragged and buttonless, but with a spray like what I sent you stuck somewhere, or a carex, or chance flower. It is about all the vanity I persistently indulge in, at least in bodily adornments.

There can be little doubt that we have in the pages of this novel a fairly accurate description of Muir's personal appearance in 1870, however distortedly she may have reproduced his views and conversation. While to her mind "his garments had the tatterdemalion style of a Mad Tom," she "soon divined that his refinement was innate, and his education collegiate." "Kenmuir, I decided in my mind, was a gentleman," so runs her naïve comment, revealing her at the same time upon her own lofty perch of assumed gentility. It is of interest to find her noting Muir's "glorious auburn hair," "his open blue eyes of honest questioning," and "his bright intelligent face, shining with a pure and holy enthusiasm." She saw his "lithe figure . . . skipping over the rough boulders, poising with the balance of an athlete, or skirting a shelf of rock with the cautious activity of a goat, never losing for a moment the rhythmic

motion of his flexile form. . . . His figure was about five feet nine, well knit, and bespoke that active grace which only trained muscles can assume." This new acquaintance, the like of whom, by her own confession, she had never met in all her travels, proved a tempting hero for her tale of Yosemite. Either from lack of skill in portrayal, or because in this case fact was stranger than fiction, the reviewers of "Zanita" were left unconvinced. "One says your character is all 'bosh,'" she writes to Muir, "and only exists in my imagination. I should like to tell him that you had an existence in my heart as well!"

The question of the Valley's origin, always one of the primary interests of Yosemite residents and visitors, is not overlooked by the author of "Zanita." The appearance of Whitney's "Yosemite Guide-Book" naturally had given new stimulus to discussion, particularly by the authoritative manner in which its author sought to settle the question. The views attributed to Muir in Mrs. Yelverton's reports of these discussions furnish a clue to the early date at which he had reached conclusions opposed to those of Whitney. Among the Valley conversations of 1870, related by her in chapter four, is one in which the alias of Whitney ascribes the formation of the Valley to the fall-

ing out of the bottom "in the wreck of creation," whereupon Kenmuir exclaims:

"Good gracious! there never was a 'wreck of creation.' As though the Lord did not know how to navigate. No bottom He made ever fell out by accident. These learned men pretend to talk of a catastrophe happening to the Lord's works, as though it were some poor trumpery machine of their own invention. As it is, it was meant to be.

"Why! I can show the Professor where the mighty cavity has been grooved and wrought out for millions of years. A day and eternity are as one in His mighty workshop. I can take you where you can see for yourself how the glaciers have labored, and cut and carved, and elaborated, until they have wrought out this royal road."

This novel also indicates that Muir knew at least as early as 1870 that ice had overridden Glacier Point, a fact of some historical interest since the origin of the name is not certainly known, and if any one other than Muir bestowed it he can hardly have grasped the meaning of the evidences of glaciation observed there. One would naturally suppose Clarence King to have been the first to perceive both the fact and the significance of it, but he set the limit of the highest ice-flood far below Glacier

Point. But Muir, during the first year of his residence in the Valley, had fathomed the meaning of its glacial phenomena much more completely than he has ever received credit for, and when he propounded a theory of glacial erosion to account for the Valley's origin, he apparently had already correlated the ice-record on Glacier Point. At any rate Mrs. Yelverton, in speaking of Glacier Point as the place where she had first seen Muir, notes the existence there of "traces of ancient glaciers which he said 'are no doubt the instruments the Almighty used in the formation of the Valley.'"

Another, more direct, witness that Muir held the glacial origin theory as early as 1870, and probably earlier, is found in the writings of his friend Joseph LeConte. The latter, for many years Professor of Geology in the University of California, arrived in the State one year later than Muir and made his first visit to Yosemite and the High Sierra with a company of students in the summer of 1870. Muir and LeConte met in Yosemite through the mediation of Mrs. Carr, and Muir, on account of his knowledge of the region north of Yosemite, was invited to accompany the party across the crest of the Sierra to Mono Lake. On the night of the eighth of August the party was en-

camped on a meadow near what is now called Eagle Peak, and there LeConte made the following entry in his journal:

> After dinner, lay down on our blankets, and gazed up through the magnificent tall spruces into the deep blue sky and the gathering masses of white clouds. Mr. Muir gazes and gazes and cannot get his fill. He is a most passionate lover of nature. Plants, and flowers, and forests, and sky, and clouds, and mountains, seem actually to haunt his imagination. He seems to revel in the freedom of this life. I think he would pine away in a city or in conventional life of any kind. He is really not only an intelligent man, as I saw at once, but a man of strong, earnest nature, and thoughtful, closely observing and original mind. I have talked much with him to-day about the probable manner in which Yosemite was formed. He fully agrees with me that the peculiar cleavage of the rock is a most important point, which must not be left out of account. He further believes that the Valley has been wholly formed by causes still in operation in the Sierra — that the Merced Glacier and the Merced River and its branches . . . have done the whole work.

This reference of LeConte to Muir's glacial observations fully bears out the evidence of Mrs. Yelverton's novel that Muir had as early as 1870 definitely reached the conclusion that Yosemite is not the result of a sudden and exceptional catastrophe, but the product of

"causes still in operation," as stated by Professor LeConte. In other words Muir was at this time aware also of the existence of residual glaciers in the High Sierra, for in his letter of August 7, 1870, he mentions his intention "to set some stakes in a dozen glaciers and gather some arithmetic for clothing my thoughts." A year later (1871) he had verified by actual measurements his belief that what Whitney called snowfields were glaciers, and he had also found one in the Merced group of mountains that was delivering glacial mud, or rock meal, showing that the process of erosion on a small scale was still going on.

LeConte's inference from Muir's conversation, that he believed the ancient Merced Glacier and subsequent Merced River to "have done the whole work" of forming Yosemite Valley, requires some modification, for Muir did assume a certain amount of pre-glacial and post-glacial erosion, as may be seen in certain passages of his "Sierra Studies." But it still is far from proved that he was wrong in regarding these particular erosion factors as subordinate. In justice to Muir it must, of course, be remembered that neither he nor any other geologist was at this time reckoning with the work of successive glacial epochs, least of all in Yosemite where the evidence of two glaciations re-

mains speculative and theoretical. These are, at most, but shiftings of the boundaries of the original problem, and in no way detract from the value of Muir's pioneering work.

What concerned Muir most at this time was the ease with which bands of Yosemite pilgrims were captured by Whitney's exceptional creation theory of the Valley's origin, thus coming to regard it as "the latest, most uncompanioned wonder of the earth."

> No wonder [said Muir] that a scientist standing on the Valley floor and looking up at its massive walls, has been unable to interpret its history. The magnitude of the characters in which the account of its origin is recorded has prevented him from reading it. "We have interrogated," says the scientist, "all the known valley-producing causes. The torrent has replied, 'It was not I'; the glacier has answered, 'It was not I'; and the august forces that fold and crevass whole mountain chains disclaim all knowledge of it."
>
> But, during my few years' acquaintance with it, I have found it not full of chaos, uncompanioned and parentless. I have found it one of many Yosemite valleys, which differ not more than one pine tree differs from another. Attentive study and comparison of these throws a flood of light upon the origin of *the* Yosemite; uniting her, by birth, with sister valleys distributed through all the principal river-basins of the range.

The scorn with which Whitney and his

assistants rejected Muir's theory and observations as those of a "shepherd" had not the slightest discouraging effect upon him, for he knew they had seen but a fraction of the evidence, and that hastily. It only sent him back to his mountain temples for more revealing facts which he wrote and preached to his friends with the zeal of a Hebrew prophet and no apology except that of Amos, "The Lord Jehovah hath spoken; who can but prophesy?" It is the voice of a man with a divine call that is heard in the following letters:

To Catharine Merrill

YOSEMITE VALLEY, *July 12th*, [1871]

DEAR FRIEND:

Your sister's note which came with the little plants tells that you are about to escape from the frightful tendencies of a "Christian" school to the smooth shelter of home. I glanced at the regulations, order, etc., in the catalogue which you sent, and the grizzly thorny ranks of cold enslaving "*musts*" made me shudder as I fancy I should had I looked into a dungeon of the olden times full of rings and thumbscrews and iron chains. You deserve great credit for venturing into such a place. None but an Indiana professor would dare the dangers of such a den of ecclesiastical slave-drivers. I

suppose that you were moved to go among those flint Christians by the same motives of philanthropy which urged you amongst other forms of human depravity.

From my page I hold my bosom to our purple rocks and snowy waters and think of the divine repose which enwraps them all together with the tuned flies, and birds, and plants which inhabit them, and I thank God for this tranquil freedom, this glorious mountain Yosemite barbarism.

I have been with you and your apostolic friends these fifteen minutes and I feel a kind of choking and sinking as though I were smothering in nightmare. Come to Yosemite! Change the subject.

Last Sabbath week I read one of the most magnificent of God's own mountain manuscripts. During my rambles of the last two years in the basin of Yosemite Creek north of the Valley, I had gathered many faint hints from what I read as glacial footprints in the rocks worn by the storms and blotting chemistry of ages. Now there is a deep cañon in the top of the Valley wall near the upper Yosemite Falls which has engaged my attention for more than a year, and I could not account for its formation in any other way than by a theory which involved the supposition that a glacier

formerly filled the basin of the stream above. Suddenly the big truth came to the birth. I ran up the mountain, 'round to the top of the falls, said my prayers, received baptism in the irised spray and ran northward toward the head of the basin, full of faith, confident that there was a writing for me somewhere on the rock, and I had not drifted four miles before I found all that I had so long sought in a narrow hollow where the ice had been compelled to wedge through under great pressure, thus deeply grooving and hardening the granite and making it less susceptible of decomposition. I continued up the stream to its source in the snows of Mt. Hoffman, and everywhere discovered strips of meadow and sandy levels formed from the matter of moraine sand and bouldery accumulations of all kinds, smoothed and leveled by overflowing waters.

This dead glacier was about twelve miles in length by about five in breadth — of depth I have as yet no reliable data. Its course was nearly north and south, at right angles to the branches of the summit glaciers which entered Yosemite by the cañons of the Tenaya and Nevada streams. It united with those opposite Hutchings', in the Valley. Perhaps it was not born so early as those of the summits, but I am sure that it died long before they were driven

from the cañons of Nevada and Tenaya. This is intensely interesting to me, and from its semi-philosophic character ought to be so in some degree to any professor. You must write. My love to all. You *must* write. I start to-morrow for the High Sierra about Mt. Dana and over in the Mono basin among the lavas and volcanoes. Will be back in a month.

To Mrs. Ezra S. Carr

YOSEMITE, *August 13th*, [1871]

DEAR FRIEND:

I was so stunned and dazed by your last that I have not been able to write anything. I was sure that you were coming, and you cannot come, and Mr. King, the artist, left me the other day, and I am done with Hutchings, and I am lonely. Well, it must be wait, for although there is no common human reason why I should not see you and civilization in Oakland, I cannot escape from the powers of the mountains. I shall tie some flour and a blanket behind my saddle and return to the Mono region, and try to decide some questions that require undisturbed thought. Then I will stalk about over the summit slates of Dana and Gibbs and Lyell, reading new chapters of glacial manuscript, and more if I can. Then, perhaps, I will follow the Tuolumne down to

the Hetch Hetchy Yosemite. Then perhaps follow every Yosemite stream back to its smallest sources in the mountains of the Lyell group and the Cathedral group and the Obelisk and Mt. Hoffman. This will, perhaps, be my work until the coming of the winter snows, when I will probably find a sheltered rock nook where I can make a nest of leaves and mosses and doze until spring.

I expect to be entirely alone in these mountain walks, and notwithstanding the glorious portion of daily bread which my soul will receive in these fields where only the footprints of God are seen, the gloamin' will be very lonely, but I will cheerfully pay this price of friendship, hunger, and *all* besides.

I suppose you have seen Mr. King, who kindly carried some [butter]flies for Mr. Edwards.[1] I thought you would easily see him or let him know that you had his specimens. I collected most of them upon Mount Hoffman, but was so busy in assisting Reilly that I could not do much in butterflies. Hereafter I shall be entirely free.

The purples and yellows begin to come in the green of our groves and the rocks have the autumn haze and the water songs are at their

[1] Mr. Henry Edwards, actor and entomologist; for a report on this package of butterflies see pp. 263, 264, ch. VIII.

lowest hushings. Young birds are big as old ones, and it is the time of ripe berries, and is it true that these are Bryant's "melancholy days"? I don't know. I will not think, but I will go above these brooding days to the higher brighter mountains. . . .

To Mrs. Ezra S. Carr

YOSEMITE, *September 8th*, 1871

DEAR FRIEND:

I am sorry that King made you uneasy about me. He does not understand me as you do, and you must not heed him so much. He thinks that I am melancholy, and above all that I require polishing. I feel sure that if you were here to see how happy I am, and how ardently I am seeking a knowledge of the rocks you could not call me away, but would gladly let me go with only God and his written rocks to guide me. You would not think of calling me to make machines or a home, or of rubbing me against other minds, or of setting me up for measurement. No, dear friend, you would say, "Keep your mind untrammeled and pure. Go unfrictioned, unmeasured, and God give you the true meaning and interpretation of his mountains."

You know that for the last three years I have been ploddingly making observations about

this Valley and the high mountain region to the East of it, drifting broodingly about and taking in every natural lesson that I was fitted to absorb. In particular the great Valley has always kept a place in my mind. How did the Lord make it? What tools did He use? How did He apply them and when? I considered the sky above it and all of its opening cañons, and studied the forces that came in by every door that I saw standing open, but I could get no light. Then I said, "You are attempting what is not possible for you to accomplish. Yosemite is the *end* of a grand chapter. If you would learn to read it go commence at the beginning." Then I went above to the alphabet valleys of the summits, comparing cañon with cañon, with all their varieties of rock structure and cleavage, and the comparative size and slope of the glaciers and waters which they contained. Also the grand congregation of rock creations were present to me, and I studied their forms and sculpture. I soon had a key to every Yosemite rock and perpendicular and sloping wall. The grandeur of these forces and their glorious results overpower me, and inhabit my whole being. Waking or sleeping I have no rest. In dreams I read blurred sheets of glacial writing or follow lines of cleavage or struggle with the difficulties of some extraordinary rock form.

Now it is clear that woe is me if I do not drown this tendency toward nervous prostration by constant labor in working up the details of this whole question. I have been down from the upper rocks only three days and am hungry for exercise already.

Professor Runkle,[1] President of the Massachusetts Institute of Technology, was here last week, and I preached my glacial theory to him for five days, taking him into the cañons of the Valley and up among the grand glacier wombs and pathways of the summit. He was fully convinced of the truth of my readings, and urged me to write out the glacial system of Yosemite and its tributaries for the Boston Academy of Science. I told him that I meant to write my thoughts for my own use and that I would send him the manuscript and if he and his wise scientific brothers thought it of sufficient interest they might publish it.

He is going to send me some instruments, and I mean to go over all the glacier basins carefully, working until driven down by the snow. In winter I can make my drawings and maps and write out notes. So you see that for a year or two I will be very busy.

I have settled with Hutchings and have no dealings with him now. I think that next

[1] John Daniel Runkle.

spring I will have to guide a month or two for pocket money, although I do not like the work. I suppose I might live for one or two seasons without work. I have five hundred dollars here, and I have been sending home money to my sisters and brothers — perhaps about twelve or fifteen hundred, and a man in Canada owes me three or four hundred dollars more which I suppose I could get if I was in need; but you know that the Scotch do not like to spend their last dollar. Some of my friends are badgering me to write for some of the magazines, and I am almost tempted to try it, only I am afraid that this would distract my mind from my main work more than the distasteful and depressing labor of the mill or of guiding. What do you think about it?

Suppose I should give some of the journals my first thoughts about this glacier work as I go along, and afterwards gather them and press them for the Boston wise. Or will it be better to hold my wheesht [1] and say it all at a breath? You see how practical I have become, and how fully I have burdened you with my little affairs!

Perhaps you will ask, "What plan are you going to pursue in your work?" Well, here it is — the only book I ever have invented. First, I

[1] Scotch word for "silence."

will describe each glacier with its tributaries separately, then describe the rocks and hills and mountains *over* which they have flowed or *past* which they have flowed, endeavoring to prove that all of the various forms which those rocks now have is the necessary result of the ice action in connection with their structure and cleavage, etc. — also the different kinds of cañons and lake basins and meadows which they have made. Then, armed with these data, I will come down to Yosemite, where all of my ice has come, and prove that each dome and brow and wall, and every grace and spire and brother is the necessary result of the delicately balanced blows of well directed and combined glaciers against the parent rocks which contained them, only thinly carved and moulded in some instances by the subsequent action of water, etc.

Libby sent me Tyndall's new book, and I have looked hastily over it. It is an alpine mixture of very pleasant taste, and I wish I could enjoy reading and talking it with you. I expect Mrs. Hutchings will accompany her husband to the East this winter, and there will not be one left with whom I can exchange a thought. Mrs. Hutchings is going to leave me out all the books I want, and Runkle is going to send me Darwin. These, with my notes and

maps, will fill my winter hours, if my eyes do not fail. And now that you see my whole position I think that you would not call me to the excitements and distracting novelties of civilization.

This bread question is very troublesome. I will eat anything you think will suit me. Send up either by express to Big Oak Flat or by any other chance, and I will remit the money required in any way you like.

My love to all and more thanks than I can write for your constant kindness.

To Mrs. Ezra S. Carr

YOSEMITE, *September or October*, 1871

DEAR FRIEND MRS. CARR:

I am again upon the bottom meadow of Yosemite, after a most intensely interesting bath among the outer mountains. I have been exploring the upper tributaries of the Cascade and Tamarack streams, and in particular all of the basin of Yosemite Creek. The present basin of every stream which enters the Valley on the north side was formerly filled with ice, which also flowed into the Valley, although the ancient ice basins did not always correspond with the present water basins because glaciers can flow up hill. The *whole* of the north wall of the valley was covered with an unbroken flow

of ice, with perhaps the single exception of the crest of Eagle Cliff, and though the book of glaciers gradually dims as we go lower on the range, yet I fully believe that future investigation will show that in the earlier ages of Sierra Nevada ice vast glaciers flowed to the foot of the range east of Yosemite, and also north and south at an elevation of 9000 feet. The glacier basins are almost unchanged, and I believe that ice was the agent by which all of the present rocks received their special forms.

More of this some other day. Would that I could have you here or in any wild place where I can think and speak! Would you not be thoroughly iced? You would not find in me one unglacial thought. Come, and I will tell you how El Capitan and Tissiack were fashioned.

I will most likely live at Black's Hotel this winter in charge of the premises, and before next spring I will have an independent cabin built, with a special Carr corner where you and the Doctor can come and stay all summer. Also, I will have a tent so that we can camp and receive night blessings where we choose, and then I will have horses enough so that we can go to the upper temples also.

I wish you could see Lake Tenaya. It is one of the most perfectly and richly spiritual places in the mountains, and I would like to preëmpt

there. Somehow I should feel like leaving home in going to Hetch Hetchy. Besides, there is room there for many other claims, and soon will fill with coarse homesteads. But as the winter is so severe at Lake Tenaya, very few will care to live there. Hetch Hetchy is about four thousand feet above sea, while Lake Tenaya is eight. I have been living in these mountains in so haunting, hovering, floating a way, that it seems strange to cast any kind of an anchor. All is so equal in glory, so ocean-like, that to choose one place above another is like drawing dividing lines in the sky.

I think I answered your last with respect to remaining here in winter. I can do much of this ice work in the quiet, and the whole subject is purely physical, so that I can get but little from books. All depends upon the goodness of one's eyes. No scientific book in the world can tell me how this Yosemite granite is put together, or how it has been taken down. Patient observation and constant brooding above the rocks, lying upon them for years as the ice did, is the way to arrive at the truths which are graven so lavishly upon them.

Would that I knew what good prayers I could say, or good deeds I could do, so that ravens would bring me bread and venison for the next two years. Then would I get some

tough gray clothes, the color of granite, so no one could see or find me but yourself. Then would I reproduce the ancient ice-rivers, and watch their workings and dwell with them. I go again to my lessons to-morrow morning.

Some snow fell and, bye the bye, I must tell you about it. If poor, good, melancholic Cowper had been here yesterday morning here is just what he would have sung:

"The rocks have been washed, just washed in a shower
Which winds to their faces conveyed.
The plentiful cloudlets bemuffled their brows,
Or lay on their beautiful heads.

But cold sighed the winds in the fir trees above,
And down in the pine trees below;
For the rain that came laving and washing in love
Was followed, alas, by a snow."

Which, being unmetaphored and prosed into sense, means that yesterday morning a strong southeast wind, cooled among the highest snows of the Sierra, drove back the warm northwest winds from the hot San Joaquin plains and burning foothill woods, and piled up a jagged cloud addition to our Valley walls. Soon those white clouds began to darken and to reach out long filmy edges, which uniting over the Valley made a close dark ceiling. Then came rain, unsteady at first, now a heavy gush, then a sprinkling halt, as if the clouds so long out of practice

had forgotten something. But after a half hour of experimental pouring and sprinkling there came an earnest, steady, well-controlled rain. On the mountain the rain soon turned to snow, and some half-melted flakes reached the bottom of the Valley. This morning Starr King and Tissiack and all the upper valley rim is white. . . .

Ever devoutly your friend,

JOHN MUIR

The following letter furnishes a good summary of Muir's glacial studies at the stage which they had reached in 1871. Attention should be called to the fact that in his opening sentence, Muir gives the California State Geological Survey credit for views which its chief had already repudiated, for in his Yosemite Guide Book of 1869 Josiah D. Whitney asserted that he had made an error in the first volume of the Survey when he stated that glaciers had entered the Valley from the head of the Merced.

To Clinton L. Merriam

YOSEMITE VALLEY, *September 24th*, 1871

DEAR MERRIAM:

The main trunk glaciers which entered Yosemite by the Tenaya, and Nevada, and South

Cañons, have been known to many since the publication of the first volume of the California State Geological Survey; but I am not aware of the existence of any published account of the smaller glaciers, which entered the Valley by the lower side cañons, or indeed that their former existence was known at all.

I have been haunting the rocks of this region for a long time, anxious to spell out some of the great mountain truths which I felt were written here, and ever since the number, and magnitude, and significance of these Yosemite glaciers began to appear, I became eager for knowledge concerning them and am now devoting all my time to their history.

You know my views concerning the formation of Yosemite, that the great Valley itself, together with all of its various domes and sculptured walls, were produced and fashioned by the united labors of the grand combination of glaciers which flowed over and through it, their forces having been rigidly governed and directed by the peculiar physical structure of the granite of which this region is made, and, moreover, that all of the rocks and lakes, and meadows of the whole upper Merced basin owe their specific forms and carving to this same glacial agency.

I left the Valley two weeks ago to explore the

main trunk glacier of Yosemite Creek basin, together with its radiating border of tributaries, gathering what data I could read regarding their age, and direction, size, etc., also the kind and amount of work which they had done, but while I was seeking for traces of the western shore of the main stream upon the El Capitan ridge, I discovered that the Yosemite glacier was not the lowest ice stream which flowed to the Valley, but that the Ribbon basin or Virgin's Tears as it is also called, was also the bed of an ancient glacier which flowed nearly south, uniting with the central glaciers of the summits, in the valley below El Capitan.

This Ribbon glacier must have been one of the very smallest of the ice streams which flowed to Yosemite, having been only about four miles in length by three in width. It had some small groove tributaries from the slopes of El Capitan, but most of its ice was derived from a high spur of the Hoffman group to the north, which runs nearly southwest. Its bed is steep and regular, and it must have flowed with considerable velocity.

I could not find any of the original grooved and polished surfaces of the old bed, but some protected patches may still exist where a boulder of the proper form has settled upon a rounded summit. I found many such pre-

served patches in the basin of Yosemite creek, one of which is within half a mile of the top of the falls. It has a polished surface of about four square feet, with very distinct striæ and grooves, although the unsheltered rock about it is eroded to the depth of four or five inches.

Inasmuch as this small glacier sloped openly to the sun, and was not very deep, it was one of the first to die, and of course its written pages have been longer exposed to blurring rains and frosts, but notwithstanding the many crumbling blotting storms which have fallen upon the lithographs of this small ice-stream, the great truth of its former existence in this home, written in characters of moraine, and meadow, and fluted slope, is just as clear as when all of its shining newborn rocks gleamed forth the full shadowless poetry of its whole life.

There are a few castle-shaped piles, and crumbling domes upon its east bank, excepting which the basin is now plain and lake-like. But it contains most lovely meadows, interesting in their present flora, and in their glacial history, and noble forests made up mostly of the two silver firs (*Picea amabilis* and *P. grandis*) planted upon moraines which have been spread and leveled by the agency of water.

These rambling researches in the Ribbon basin recalled some observations made by me

a year ago in the lower portion of the cañons of the Cascade and Tamarack streams, and I now guessed that careful search would discover abundant glacial manuscript in those basins also. Accordingly on reaching the highest point on the rim of the Ribbon ice, I obtained broad map views of both the Cascade and Tamarack basins, and singled out from their countless adornments many forms of lake, and rock, which seemed to be genuine glacier workmanship, unmarred in any way by the various powers which have come upon them since they were abandoned by their parent ice.

This highest ridge of the Ribbon glacier basin, bounded its ice on the north, and upon its opposite side I saw shining patches, which I ran down to examine. They proved to be polished unchanged fragments of the bottom of another ancient ice stream, which according to the testimony of their striæ, had flowed south 40° west. This new glacier proved to be the eastmost tributary of the Cascade. Anxious to know it better, I proceeded west along the Mono trail to Cascade meadows, then turning to the right, entered the mouth of the tributary at the upper end of the meadows. Both of the ridges which formed the banks of the stream are torn and precipitous, evidently the work of ice. I followed up the bed of the tributary to

its source, upon the flat west bank of the Yosemite basin, and throughout its whole length there is abundance of polished tablets, and moraines, and various kinds of rock sculpture forming ice testimony as full and indisputable as can be rendered by the most recent glacier pathways of the Alps.

I should gladly have welcomed the grateful toil of exploring the main trunk of this Cascade glacier from its farthest snows upon the Tuolumne divide, to its mouth in the Merced Cañon below Yosemite, but my stock of provisions was too small, and besides I felt that I would most likely have to explore the basin of Tamarack also, and following westward among the older, changed, and covered glacier highways, I might drift as far as the end of Pilot Peak ridge. Therefore turning reluctantly to the easier pages of Yosemite Creek I resolved to leave those lower chapters for future lessons. But before proceeding with Yosemite Creek let me distinctly give here as my opinion that future investigation will discover proofs of the existence in the earlier ages of a Sierra Nevada ice of vast glaciers which flowed to the very foot of the range.

Already it is clear that all of the upper basins were filled with ice, so deep and universal that but few of the ridges were sufficiently high to

separate it into individual glaciers. Vast mountains were flowed over, and rounded or moved away like boulders in a river.

Ice flowed into Yosemite by every one of its cañons, and at a comparatively recent period of its history, its north wall, with perhaps the single exception of the crest of Eagle Cliff, was covered with an unbroken stream of ice, the several glaciers having united before coming to the wall.

JOHN MUIR

Fortunately Muir decided not to hold his "wheesht." The above letter is an abridgment of an article, entitled "Yosemite Glaciers," that he sent four days later as his "first thoughts" to the New York "Tribune." After some delay it appeared in that paper, December 5, 1871, and constitutes the first published statement of the ice erosion theory to account for the origin of Yosemite. It is but just to point out that Muir was not following in any one's footsteps in propounding his theory,[1] for

[1] William Phipps Blake has been mistakenly credited with being the originator of the theory. In his paper "Sur l'action des anciens glaciers dans la Sierra Nevada de Californie et sur l'origine de la vallée de Yo-Semite," published in the *Comptes Rendus des Séances de l'Académie des Sciences de Paris*, tome 65, 1867, the origin of the Valley is ascribed to sub-glacial erosion by water pouring from the glaciers above. The precise form of statement is as follows: "On peut en con-

the simple reason that there was no one to be followed, and though he put forward but a small part of his evidence, it proved to be the beginning of the end of Whitney's subsidence theory.

Muir had hardly published his views and discoveries when Professor Samuel Kneeland, of the Massachusetts Institute of Technology, utilized his article, together with letters he had written to President J. D. Runkle, to prepare a paper [1] for the Boston Society of Natural History. Muir did not approve of the use that Kneeland made of his materials, claiming that he gave him "credit for all the smaller sayings and doings and stole the broadest truth to himself." But the paper had the effect of attracting considerable attention to Muir's views and explorations.

Meanwhile Muir was going at his task systematically. The difficulty of correlating his studies without good maps was in large measure surmounted by his ability to sketch accurately and rapidly the physical features of the region under examination. Nothing shows better his

clure que cette vallée parait due à une érosion sous-glaciaire, due à l'écoulement des eaux provenant de la fonte des glaces supérieures."

[1] "On the Glaciers of the Yosemite Valley," read at a meeting held February 21, 1872, and published in the *Proceedings* of the Society, vol. xv, pp. 36–47 (1872). Also republished the same year in Kneeland's book *The Wonders of Yosemite Valley and of California.*

industry and the minute care with which he worked than the large number of mountain sketches that date from this period. By means of them he could, when working up his results, call to mind with particularity and vividness the physiography of the country in connection with his notes.

Early in November, 1871, when winter cold was already settling upon the heights, he made his first expedition to Hetch Hetchy, the "Tuolumne Yosemite," as he aptly described it, whose needless destruction and conversion to the domestic uses of San Francisco was to sadden the evening of his life. A hunter by the name of Joseph Screech is said to have discovered the Valley in 1850, a year before Yosemite was entered for the first time by Captain Boling's party. In 1871 its use was claimed by a sheep owner named Smith and consequently was often called Smith's Valley. This man's shepherd and a few Digger Indians were the only occasional inhabitants of the Valley at this time.

Excerpts from a description of this "last raid of the season" will give the reader an idea of the manner in which he fared on these lonely excursions.

I went alone [he writes], my outfit consisting of a pair of blankets and a quantity of bread and coffee.

There is a weird charm in carrying out such a free and pathless plan as I had projected; passing through untrodden forests, from cañon to cañon, from mountain to mountain; constantly coming upon new beauties and new truths. . . . As I drifted over the dome-paved basin of Yosemite Creek . . . sunset found me only three miles back from the brow of El Capitan, near the head of a round smooth gap — the deepest groove in the El Capitan ridge. Here I lay down and thought of the time when the groove in which I rested was being ground away at the bottom of a vast ice-sheet that flowed over all the Sierra like a slow wind. . . . My huge camp fire glowed like a sun. . . . A happy brook sang confidingly, and by its side I made my bed of rich, spicy boughs, elastic and warm. Upon so luxurious a couch, in such a forest, and by such a fire and brook, sleep is gentle and pure. Wildwood sleep is always refreshing; and to those who receive the mountains into their souls, as well as into their sight — living with them clean and free — sleep is a beautiful death, from which we arise every dawn into a new-created world, to begin a new life in a new body.

The second day he suddenly emerged on top of the wall of the main Tuolumne Cañon about two miles above Hetch Hetchy. After describing glowingly the cañon floor four thousand feet below and the sublime wilderness of mountains around and beyond, he indulges in some reflections on the diversity of impression produced upon different persons by such a scene.

To most persons unacquainted with the genius of the Sierra Nevada [he observes], especially to those whose lives have been spent in shadows, the impression produced by such a landscape is dreary and hopeless. Like symbols of a desolate future, the sunburned domes, naves, and peaks, lie dead and barren beneath a thoughtless, motionless sky; weed-like trees darken their gray hollows and wrinkles, with scarcely any cheering effect. To quote from a Boston professor [J. D. Whitney], "The heights are bewildering, the distances overpowering, the stillness oppressive, and the utter barrenness and desolation indescribable." But if you go to the midst of these bleached bones of mountains, and dwell confidingly and waitingly with them, be assured that every death-taint will speedily disappear; the hardest rocks will pulse with life, secrets of divine beauty and love will be revealed to you by lakes, and meadows, and a thousand flowers, and an atmosphere of spirit be felt brooding over all.

He descended into the cañon by what he at first supposed to be a trail laid out by Indians, but soon discovered that it was a bear-path leading to harvests of brown acorns in black oak groves and to thickets of berry-laden manzanita. Muir never went armed on any of these exploratory excursions, his aim being, so far as in him lay, to live at peace with all the inhabitants of the wilds.

The sandy ground [he notes] was covered with

Santa
Pac
San Jose

bear-tracks; but that gave me no anxiety, because I knew that bears never eat men where berries and acorns abound. Night came in most impressive stillness. My blazing fire illumined the brown columns of my guardian trees, and from between their bulging roots a few withered breckans and golden-rods leaned forward, as if eager to drink the light. Here and there a star glinted through the shadowy foliage overhead, and in front I could see a portion of the mighty cañon walls massed in darkness against the sky; making me feel as if at the bottom of the sea. The near, soothing hush of the river joined faint, broken songs of cascades. I became drowsy, and, on the incense-like breath of my green pillow, I floated away into sleep.

After a careful exploration of the Hetch Hetchy Valley he struck, on his return, straight across the mountains toward Yosemite. November storms often blanket the High Sierra in snow, and he was caught in the edge of a storm on the way back.

During the first night [he writes] a few inches of snow fell, but I slept safely beneath a cedar-log, and pursued my journey next day, charmed with the universal snow-bloom that was upon every tree, bush, and weed, and upon all the ground, in lavish beauty. I reached home the next day, rejoicing in having added to my mountain wealth one more Yosemite Valley.

Thus ended the exploring season of 1871, and in the following letter, written to his mother

immediately after the Hetch Hetchy excursion, we get a glimpse of his plans:

To Mrs. Daniel Muir

YOSEMITE VALLEY, *November 16th*, [1871]

DEAR MOTHER:

Our high-walled home is quiet now; travel has ceased for the season, and I have returned from my last hard exploratory ramble in the summit mountains. I will remain during the winter at Black's Hotel, taking care of the premises and working up the data which I have garnered during these last months and years concerning the ancient glacial system of this wonderful region. For the last two or three months I have worked incessantly among the most remote and undiscoverable of the deep cañons of this pierced basin, finding many a mountain page glorious with the writing of God and in characters that any earnest eye could read. The few scientific men who have written upon this region tell us that Yosemite Valley is unlike anything else, an exceptional creation, separate in all respects from all other valleys, but such is not true. Yosemite is one of *many*, one chapter of a great mountain book written by the same pen of ice which the Lord long ago passed over every page of our great Sierra Nevadas. I know how Yosemite and all the

other valleys of these magnificent mountains were made and the next year or two of my life will be occupied chiefly in writing their history in a human book — a glorious subject, which God help me preach aright.

I have been sleeping in the rocks and snow, often weary and hungry, sustained by the excitements of my subject and by the Scottish pluck and perseverance which belongs to our family. For the last few days I have been eating and resting and enjoying long warm sleeps beneath a roof, in a warm, rockless, boulderless bed.

In all my lonely journeys among the most distant and difficult pathless, passless mountains, I never wander, am never lost. Providence guides through every danger and takes me to all the truths which I need to learn, and some day I hope to show you my sheaves, my big bound pages of mountain gospel.

I have been busy moving my few chattels from Hutchings' to Black's, about half a mile down the Valley, and I scarce feel at home. Tidings of the great far sweeping fires have reached our hidden home, and I am thankful that your section of towns and farms has been spared. I heard a few weeks ago from David and Joanna and learn that all is well. Wisconsin winter will soon be upon you. May you

enjoy its brightness and universal beauty in warm and happy homes.

Our topmost mountains are white with their earliest snow, but the Valley is still bare and brown with rustling leaves of the oak and alder and fronds of the fast fading ferns. Between two and three thousand persons visited the Valley this summer. I am glad they are all gone. I can now think my thoughts and say my prayers in quiet.

Ever devoutly yours in family love

JOHN

II

It was during the winter of 1871–72 that Muir began to write for publication. "In the beginning of my studies I never intended to write a word for the press," he was accustomed to remark to his friends. But in September, 1871, he sent the first of several serial letters to the New York "Daily Tribune," and it appeared on December 5, 1871, under the title "Yosemite Glaciers." The second and third, entitled "Yosemite in Winter" and "Yosemite in Spring," appeared January 1 and May 7, 1872. Extracts from letters written to friends in Boston were read at the February, March, and May meetings of the Boston Society of Natural History by Dr. Samuel Kneeland, and

were afterwards published in the "Proceedings" of the Society. In April, 1872, he began a series of contributions to the "Overland Monthly," whose editorial direction had then passed from Francis Bret Harte to Benjamin P. Avery. This was the magazine upon which John H. Carmany, its publisher, is reputed to have spent thirty thousand dollars — to make Bret Harte famous. Muir's first contribution, placed through the mediation of Mrs. Carr, was "Yosemite Valley in Flood" — a vivid description of a great storm that swept Yosemite for three days during the preceding December. This article, exciting instant and widespread interest, was followed in July by "Twenty Hill Hollow."

Many of his friends at this time were aware of his literary ability through his letters and were urging him to write, but no one had assessed his genius and his literary powers more accurately than his friend Jeanne C. Carr. In an extant fragment of a letter written in March she informs him that she has combined two of his glacial letters, one written to her and the other to Professor LeConte, and that she is sending this combination to Emerson with the request to get it published in the "Atlantic." "You are not to know anything about it," she writes — "let it take its chances."

"My mind is made up on one point," she continues. "All this fugitiveness is going to be gathered up, lest you should die like Moses in the mountains and God should bury you where 'no man knoweth.' I copied every word of your old Journal. It looks pretty, and reads well. You have only to continue it and make the 'Yosemite Year Book,' painting in your inimitable way the march of the seasons there. Try your pen on the humans, too. Get sketches at least. I think it would be a beautiful book. Then you will put your scientific convictions into clear-cut crystalline prose for other uses." To these suggestions the following letter is in part a reaction:

To Mrs. Ezra S. Carr

Yosemite Valley, *March 16th*, [1872]

Dear Mrs. Carr:

Yours of February 26 reached me to-day, and as I have a chance to send you a hasty line by an Indian who is going to Mariposa I would say that I fear you are giving yourself far too much trouble about those little fragments. If they or any other small pieces that chance to the end of my pen give you and the Doctor any pleasure I am well paid. Very few friends besides will care for them. . . .

You don't understand my reference to

Ruskin's "moderation." Don't you remember that he speaks in some of his books about the attributes of Nature, "Repose," "Moderation," etc.? He says many true and beautiful things of Repose, but weak and uninspired things concerning Moderation, telling us most solemnly that Nature is never immoderate! and that if he had the power and the paint he would have "Moderation" brushed in big capitals upon all the doors and lintels of art factories and manufactories of the whole world!! etc., etc., as near as I can recollect. The heavy masonry of the Sierra seems immoderate to some.

I am astonished at your copying those dry tattered notes. People speak of writing with one foot in the grave. I wrote most of those winter notes with one foot in bed while stupid with the weariness of Hutchings' logs. I'm not going to die until done with my glaciers. As for that glacier which you propose to construct out of your letter and LeConte's, I cannot see how a balanced unit can be made from such material.

I had a letter from Emerson the other day of which I told you in another letter. He prophesies, in the same dialect that you are accustomed to use, that I shall one day go to the Atlantic Coast. He knows nothing of my present ice work.

I read your Hindu extracts with much interest. I am glad to know, by you and Emerson and others living and dead, that my unconditional surrender to Nature has produced exactly what you have foreseen — that drifting without human charts through light and dark, calm and storm, I have come to so glorious an ocean. But more of this by and by.

As for that idea of Mountain Models, I told Runkle last fall that a model, in plaster of Paris, of a section of the Sierra reaching to the summits, including Yosemite, would do more to convince people of the truth of our glacial theory of the formation of the Valley and of cañons in general than volumes of rocky argument; because magnitudes are so great only very partial views are obtained. He agreed with me and promised to send me a box with plaster for a model three or four feet long, and instruments, barometer, level, etc., but it has not come.

I have material for some outline glacier maps, but as I had no barometer last fall I have no definite depths of cañons or heights. If you think they would be worth presenting to the wise Congress of next summer, I will send them. Emerson told me, hurry done with the mountains. I don't see how he knows I am meddling with them. Have you told him? He

says I may go East with Agassiz. I will not be done here for several years.

I am in no hurry. I want to see all the world. I am going to be down about the Golden Gate looking for a mouth to a portion of my ice. I answered two others of yours dated 4th and 8th of February, but the letter is still here. I will risk only this with Lo.

[John Muir]

During the month of February he had got in touch again with his friend Emily Pelton, of Prairie du Chien days. In 1864, on the way back from his botanical ramble down the Wisconsin River, he had made a détour to pay her a visit, but her uncle, for reasons of his own, had contrived to prevent a meeting by telling him that she was not at home. Years had passed since then, and now her coming to California opened the prospect of a visit to Yosemite. "You will require no photographs to know me," he writes. "The most sun-tanned and round-shouldered and bashful man of the crowd — if you catch me in a crowd — that's me! . . . In all these years since I saw you I have been isolated; somehow I don't mould in with the rest of mankind and have become far more confusedly bashful than when I lived in the Mondell."

He recalls with amusement his odd appearance when he came to Prairie du Chien, and how he rebuked various members of the Mondell circle for irreverence and sins of one kind or another. And then shines forth a characteristic Muir trait — undying loyalty and devotion to his friends. For he adds: "something else I remember, Emily, — your kind words to me the first time I saw you. Kind words are likely to live in any human soil, but planted in the heart of a Scotchman they are absolutely immortal, and whatever Heaven may have in store for you in after years you have at least one friend while John Muir lives."

The subjoined letter to her, though apparently written hurriedly, is significant for its clear-cut and pungent defense of his mode of life and the effect which he believed it to have upon his character. Miss Pelton did not visit the Valley until June, 1873. In her party, which camped in Tenaya Cañon for nine days, were Mrs. Carr, A. Kellogg, botanist of the California Academy of Sciences, William Keith, the artist, and several others. Muir's acquaintanceship with Keith, begun on a previous visit to the Valley, speedily ripened into a devoted and lasting friendship.

The projected excursion with Professor LeConte, mentioned in the same letter, acquires

significance in connection with the latter's publication of a paper on "Some Ancient Glaciers of the Sierra," read in September, 1872, before the California Academy of Sciences. In this paper Professor LeConte made the first published announcement of Muir's discovery of living glaciers in the Sierra Nevada. LeConte gave Muir full credit for this discovery, but the freedom with which the latter, in conversation as well as in his letters, poured out the results of his exploratory work before his scientific friends gave point to Mrs. Carr's fear that others, less scrupulous, might obtain the credit and reap the advantage of his glacial discoveries. She therefore urged him, as will appear later, to do his own publishing of his discoveries.

To Emily Pelton

YOSEMITE VALLEY, *April* 2, 1872

DEAR FRIEND EMILY:

Your broad pages are received. You must never waste letter time in apologies for size. The more vast and prairie-like the better. But now for the business part of your coming. Be sure you let me know within a few days the time of your setting out so that I may be able to keep myself in a findable, discoverable place. I am, as perhaps I told you, engaged in the

study of glaciers and mountain structure, etc., and I am often out alone for weeks where you couldn't find me. Moreover, I have a good many friends of every grade who will be here, all of whom have greater or lesser claims on my attention. With Professor LeConte I have made arrangements for a long scientific ramble back in the summits; also with Mrs. Carr. You will readily understand from these engagements and numerous other probabilities of visits, especially from scientific friends who almost always take me *out of* Yosemite, how important it is that I should know very nearly the time of your coming. I would like to have a week of naked, unoccupied time to spend with you and nothing but unavoidable, unescapable engagements will prevent me from having such a week.

If Mr. Knox would bring his team you could camp out, and the expense would be nothing, hardly, and you could make your headquarters at a cabin I am building. This would be much the best mode of traveling and of seeing the Valley. Independence is nowhere sweeter than in Yosemite. People who come here ought to abandon and forget all that is called business and duty, etc.; they should forget their individual existences, should forget they are born. They should as nearly as possible live the life of

a particle of dust in the wind, or of a withered leaf in a whirlpool. They should come like thirsty sponges to imbibe without rule. It is blessed to lean fully and trustingly on Nature, to experience, by taking to her a pure heart and unartificial mind, the infinite tenderness and power of her love.

You mention the refining influences of society. Compared with the intense purity and cordiality and beauty of Nature, the most delicate refinements and cultures of civilization are gross barbarisms.

As for the rough vertical animals called men, who occur in and on these mountains like sticks of condensed filth, I am not in *contact* with them; I do not live with them. I live alone, or, rather, with the rocks and flowers and snows and blessed storms; I live in blessed mountain *light*, and love nothing less pure. You'll find me rough as the rocks and about the same color — granite. But as for loss of pure-mindedness that you seem to fear, come and see my teachers; come, see my Mountain Mother, and you will be at rest on that point.

We have had a glorious storm of the kind called earthquake. I've just been writing an account of it for the New York "Tribune."[1] It would seem strange that any portion of our

[1] Issue of May 7, 1872.

perpendicular walls are left unshattered. It is delightful to be trotted and dumpled on our Mother's mountain knee. I hope we will be blessed with some more. The first shock of the morning of [March] 26th, at half-past two o'clock, was the most sublime storm I ever experienced.

Most cordially yours

JOHN MUIR

The above-mentioned earthquake was one of great intensity and made one of the memorable experiences of his life. He sent a description of it to the Boston Society of Natural History and to several friends.

Though I had never enjoyed a storm of this sort [he wrote], the thrilling motion could not be mistaken, and I ran out of my cabin, both glad and frightened, shouting, "A noble earthquake!" feeling sure I was going to learn something. The shocks were so violent and varied, and succeeded one another so closely, that I had to balance myself carefully in walking as if on the deck of a ship among waves, and it seemed impossible that the high cliffs of the valley could escape being shattered. In particular, I feared that the sheer-fronted Sentinel Rock, towering above my cabin, would be shaken down, and I took shelter back of a large yellow pine hoping that it might protect me from at least the smaller outbounding boulders. For a minute or two the shocks became more and more violent — flashing

horizontal thrusts mixed with a few twists and battering, explosive, upheaving jolts — as if Nature were wrecking her Yosemite temple, and getting ready to build a better one.

It was on this occasion that he saw Eagle Rock on the south wall give way and fall into the Valley with a tremendous roar.

I saw it falling [writes Muir] in thousands of the great boulders I had so long been studying, pouring to the Valley floor in a free curve luminous with friction, making a terribly sublime spectacle — an arc of glowing passionate fire, fifteen hundred feet span, as true in form and as serene in beauty as a rainbow in the midst of the stupendous roaring rock-storm.

He was thrilled by the phenomenon, for he realized that by a fortunate chance he was enabled to witness the formation of a mountain talus, a process about which he had long been speculating.

Before the great boulders had fairly come to rest he was upon the new-born talus, listening to the grating, groaning noises with which the rocks were gradually settling into their places. His scientific interest in the phenomenon made him so attentive to even its slightest effects that all fear was banished, and he astounded his terrified fellow residents of Yosemite with his enthusiastic recital of his observations. They

were ready to flee to the lowlands, leaving the keys of their premises in his hands, while he prepared to resume his glacial studies, armed with fresh clues to the origin of cañon taluses.

To Mrs. Ezra S. Carr

New Sentinel Hotel
Yosemite Valley, [*April*, 1872]

Sunday night I was up in the moon among the lumined spray of the upper Falls. The lunar bows were glorious and the music Godful as ever. You will yet mingle amid the forms and voices of this peerless fall.

I wanted to have you spend two or three nights up there in full moon, and planned a small hut for you, but since the boisterous waving of the rocks, the danger seems forbidding, at least for you. We can go up there in the afternoon, spend an hour or two, and return.

I had a grand ramble in the deep snow outside the Valley, and discovered one beautiful truth concerning snow structure, and three concerning the forms of forest trees.

These earthquakes have made me immensely rich. I had long been aware of the life and gentle tenderness of the rocks, and instead of walking upon them as unfeeling surfaces, began to regard them as a transparent sky. Now

they have spoken with audible voice *and* pulsed with common motion. This very instant, just as my pen reached "and" on the third line above, my cabin creaked with a sharp shock and the oil waved in my lamp.

We had several shocks last night. I would like to go somewhere on the west South American coast to study earthquakes. I think I could invent some experimental . . .

[Rest of letter lost.]

To Mrs. Ezra S. Carr

New Sentinel Hotel
Yosemite Valley, *April 23d*, 1872

Dear Mrs. Carr:

Yours of April 9th and 15th, containing Ned's canoe and colonization adventures came to-night. I feel that you are coming, and I will not hear any words preparatory of consolation for the unsupposable case of your non-appearance.

Come by way of Clark's, and spend a whole day or two in the Sequoias. Thence to Sentinel Dome and Glacier Point. From thence swoop to our meadows and groves *direct* by a trail now in course of construction which will be completed by the time the snow melts. This new trail will be the best in scenery and safety of five which enter the Valley. It leads from Glacier Point down the face of the mountain by

an easy grade to a point back of Leidig's hotel, and has over half a dozen Inspiration Points.

I hear that Mr. Paregoy intends building a hotel at Glacier Point. If he does you should halt there for the night after leaving Clark's. If not, then stop at the present "Paregoy's" five or six miles south of the Valley at the Westfall Meadows — built since your visit. You might easily ride from Clark's to the Valley in a day, but a day among the silver firs and another about the glories of the Valley rim and settings is a "sma' request."

The snow is deep this year, and the regular Mariposa trail leading to Glacier Point, etc., will not be open before June. The Mariposa travel of May, and perhaps a week or so of June, will enter the Valley from Clark's by a sort of sneaking trail along the river cañon below the snow, but you must not come that way.

You may also enter the Valley via Little Yosemite and Nevada and Vernal Falls, by a trail constructed last season; also by Indian Cañon on the north side of the Valley by a trail now nearly completed. This last is a noble entrance, but perhaps not equal to the first. Whatever way you come we will travel all of these, up or down, and bear in mind that you must go among the summits in July or August. Bring no friends that will not go to these

fountains beyond, or are uncastoffable. Calm thinkers like your Doctor, who first fed me with science, and LeConte are the kind of souls fit for the formation of human clouds adapted to this mountain sky. Nevertheless, I will rejoice beyond measure, though you come as a comet tailed with a whole misty town. Ned is a brave fellow. God bless him unspeakably and feed him with his own South American self.

I shall be most happy to know your Doggetts or anything that you call dear. I have not seen any of my "Tribune" letters, though I have written five or six. Send copy if you can. Good-night and love to all,

J. M.

To Miss Catharine Merrill

New Sentinel Hotel
Yosemite Valley, *June 9th*, 1872

Catharine Merrill,
My dear Friend:

I am very happy to hear your hand language once more, but in some places I am black and blue with your hurricane of scolding.

I [am] glad you so much enjoy your work (not scolding), but am sorry to hear of the languor which clearly speaks of struggles and long-continued toil of nerve-exhausting kind. I hope

you will not persist in self-sacrifice of so destructive a species. The sea will do you good; bathe in it and bask in sunshine and allow the pure and generous currents of universal uncolleged beauty to blow about your bones and about all the overworked wheels of your mind. I know very well how you toil and toil, striving against lassitude and the cloudy weather of discouraging cares with a brave heart, your efforts toned by the blessedness of doing good; but do not, I pray you, destroy your health. The Lord understands his business and has plenty of tools, and does not require over-exertion of any kind.

I wish you could come here and rest a year in the simple unmingled Love fountains of God. You would then return to your scholars with fresh truth gathered and absorbed from pines and waters and deep singing winds, and you would find that they all sang of fountain Love just as did Jesus Christ and all of pure God manifest in whatever form. You say that good men are "nearer to the heart of God than are woods and fields, rocks and waters." Such distinctions and measurements seem strange to me. Rocks and waters, etc., are words of God and so are men. We all flow from one fountain Soul. All are expressions of one Love. God does not appear, and flow out, only from

narrow chinks and round bored wells here and there in favored races and places, but He flows in grand undivided currents, shoreless and boundless over creeds and forms and all kinds of civilizations and peoples and beasts, saturating all and fountainizing all.

You say some other things that I don't believe at all, but I have no room to say them nay; further — I don't stab the old grannies where I wasted so much time, the colleges of all kinds, "Christian" and common, West and Northwest, with their long tails of pretensions. I only said a few words of free sunshine, using the dim old clouds of learning for a background.

My love to Mina and Mrs. Moores and the dear younglings. The falls are in song gush and the light is balmed with summer love. Would I could send some. I shall be sure to keep you an open letter-road so that you can see your Merrill whom you all commit so confidingly to my care. Hoping that you will get strength by the sea and enjoy all the spiritual happiness you deserve, I am ever cordially

Your friend

JOHN MUIR

To Mrs. Ezra S. Carr

New Sentinel Hotel
Yosemite Valley, *July 6th*, 187[2]

Dear Mrs. Carr:

Yours of Tuesday eve, telling me of our Doggetts and Ned and Merrill Moores, has come. So has the lamp and the book. I have not yet tried the lamp, but it is splendid in shape and shines grand as gold.

The Lyell is just what I wanted. I think that your measure of the Doggetts is exactly right. As good as civilized people can be, they have grown to the top of town culture and have sent out some shoots half-gropingly into the spirit sky.

I am very glad to know that Ned is growing strong. Perhaps we may [see] South America together yet. I hope to see you come to your own of mountain fountains soon. Perhaps Mrs. Hutchings may go with us. You live so fully in my own life that I cannot realize that I have not yet seen you here. A year or two of waiting seems nothing.

Possibly I may be down on your coast this fall or next, for I want to see what relations the coast and coast mountains have to the Sierras. Also I want to go north and south along this range, and then among the basins and ranges

eastward. My subject is expanding at a most unfollowable pace. I could write something with data already harvested, but I am not satisfied.

I have just returned from Hetch Hetchy with Mrs. [J. P.] Moore. Of course we had a glory and a fun — the two articles in about parallel columns of equal size. Meadows grassed and lillied head-high, spangled river reaches, and currentless pools, cascades countless and unpaintable in form and whiteness, groves that heaven all the Valley! You were with us in all our joy, and you will come again.

I am a little weary and half incline to truantism from mobs, however blessed, in some unfindable grove. I start in a few minutes for Clouds' Rest with Mr. and Mrs. Moore.

I am ever your friend

J. Muir

To Mrs. Ezra S. Carr

New Sentinel Hotel
Yosemite Valley, *July 14th*, 1872

Dear Mrs. Carr:

Yours announcing Dr. [Asa] Gray is received. I have great longing for Gray whom I feel to be a great, progressive, unlimited man like Darwin and Huxley and Tyndall. I will be most glad to meet him. You are unweariable in your

kindness to me, and you helm my fate more than all the world beside.

I am approaching a kind of fruiting time in this mountain work, and I want very much to see you. All say "*Write*," but I don't know how or what; and, besides, I want to see North and South, and the inland basins and the sea-coast, and all the lake basins and the cañons, also the Alps of every country and the continental glaciers of Greenland, before I write the book we have been speaking of. All this will require a dozen years or twenty, and money. The question is, what will I write now, etc.? I have learned the alphabet of ice and mountain structure here, and I think I can read fast in other countries. I would let others write what I have read here, but that they make so damnable a hash of it and ruin so glorious a unit.

I miss the [J. P.] Moores because they were so cordial and kind to me. Mrs. Moore believes in ice and can preach it too. I wish you could bring Whitney and her together and tell me the fight. Mrs. Moore made the most sensible visit to our mountains of all comers I have known. Mr. Moore is a man who thinks and he took to this mountain structure like a pointer to partridges. . . . Talk to Mrs. Moore about Hetch Hetchy, etc. She knows it all

from Hog Ranch to highest sea wave cascades, and higher, yet higher.

I ought not to fun away letter space in speaking to you. Yet I am weary and impractical and fit for nothing serious until I am tuned and toned by a few weeks of calm. . . .

Farewell. I will see you and we will plan work and ease and days of holy mountain rest. . . .

Remember me to Ned and all the boys, and to the Doctor, who ought to come hither with you. Ever thine

JOHN MUIR

To Sarah Muir Galloway

YOSEMITE VALLEY, *July 16th*, 1872

DEAR SISTER SARAH:

Your bundle composed of socks and letters has arrived, for which I am much indebted. I had not seen the [New York] "Tribune" letter you sent. I want you to see all I write, good or bad. I may some time write regularly for some journal or other. My scientific friends are clamorous for glaciers, etc.

I have had a great day in meeting Dr. Asa Gray, the first botanist in the world. My Boston friends made him know me before he came, and I expect a grand time with him. While waiting for Gray this afternoon on the

mountain-side I climbed the Sentinel Rock, three thousand feet high. Here is an oak sprig from the top.

Merrill Moores came a couple of days ago to spend a few months with me. I am very happy, but have to see too many people for the successful prosecution of my studies.

Full moon lights all the groves and rocks and casts splendid masses of shade on meadow and wall. Visitors jar and noise, but Nature goes grandly and calmly over all confusion like winds over our domes. . . .

I hope to see Agassiz this summer, and if I can get him away into the outside mountains among the old glacier wombs alone, I shall have a glorious time. . . .

J. Muir

During the latter part of July, Mrs. Carr, in one of her letters, suggested a way in which he might study the Coast Range with her Oakland home as a base.

This is what you are going to do [she writes]. After the harvest time is over, and the last bird plucked (I wish I could see some of your game birds; all that I see are sacred storks and ibises), you will pack up all your duds, ready to leave [Yosemite] two or more years, take your best horse and ride forth some clear September morning. You will live

with us, and your horse at Moore's near by, whenever you are not exploring the Coast Range. We will have some choice side trips . . . You will pass the winter here, and meanwhile ways will open for you to go to South America. You will write up all your settled convictions, and put your cruder reflections in the form of notes and queries, not without scientific worth, and securing to yourself any advantage there may be in priority of observation. So writing, and studying, and visiting, the months will pass swiftly until your Valley home is filled again with color and song. God will teach you, as He has taught me, that the dear places and the dearer souls are but tents of a night; we must move on and leave them, though it cost heart-breaks. Not those who cling to you, but those who walk apart, yet ever with you, are your true companions.

The proposed plan had for him one fatal defect. It revealed too patent a design to separate him from Yosemite and for this he was not ready. Here follows his reply:

To Mrs. Ezra S. Carr

YOSEMITE VALLEY, *August 5th*, 1872

DEAR MRS. CARR:

Your letter telling me to catch my best glacier birds and come to you and the Coast mountains only makes me the more anxious to see you, and if you cannot come up I will have to come down, if only for a talk. My birds are flying everywhere, into all mountains and plains

of all climes and times, and some are ducks in the sea, and I scarce know what to do about it. I must see the Coast Ranges and the coast, but I was thinking that a month or so might answer for the present, and then, instead of spending the winter in town, I would hide in Yosemite and write, or I thought I would pack up some meal and dried plums to some deep wind-sheltered cañon back among the glaciers of the summits and write there and be ready to catch any whisper of ice and snow in these highest storms.

You anticipate all the bends and falls and rapids and cascades of my mountain life and I know that you say truly about my companions being those who live with me in the same sky, whether in reach of hand or only of spiritual contact, which is the most real contact of all. I am learning to live close to the lives of my friends without ever seeing them. No miles of any measurement can separate your soul from mine.

[Part of the letter missing.]

The Valley is full of sun, but glorious Sierras are piled above the South Dome and Starr King. I mean the bossy cumuli that are daily upheaved at this season, making a cloud period yet grander than the rock-sculpturing, Yosemite-making, forest-planting glacial period.

Yesterday we had our first midday shower; the pines waved gloriously at its approach, the woodpeckers beat about as if alarmed, but the humming-bird moths thought the cloud shadows belonged to evening and came down to eat among the mints. All the firs and rocks of Starr King were bathily dripped before the Valley was vouchsafed a single drop. After the splendid blessing the afternoon was veiled in calm clouds, and one of intensely beautiful pattern and gorgeously *irised* was stationed over Eagle Rock at the sunset. Farewell. . . .

As ever

Your friend

JOHN MUIR

Instead of coming down to Oakland he writes to her three weeks later, "My horse and bread, etc., are ready for upward. I returned three days ago from Mounts Lyell, McClure, and Hoffman. I spent three days on a glacier up there planting stakes, etc. This time I go to the Merced group, one of whose mountains shelters a glacier. . . . Ink cannot tell the glow that lights me at this moment in turning to the mountains. I feel strong to leap Yosemite walls at a bound. Hotels and human impurity will be far below. I will fuse in spirit skies."

Meanwhile Muir was enlarging the circle of

his scientific friends and strengthening the bonds that united him to old ones. Professor Asa Gray had returned to Cambridge, enthusiastic about his Yosemite excursions, and sent Muir a list of live plants he wanted for the Botanic Garden "at the rate of a cigar box full of each." The latter was still nursing disappointment that Gray had not accompanied him on an excursion into the high mountains north of Yosemite. "If you and Mrs. Gray," he writes, "had only exposed yourselves to the plants and rocks and waters and glaciers of our glorious High Sierra, I would have been content to have you return to your Cambridge classes and to all of the just and proper ding dong of civilization."

Mrs. Carr meanwhile was acting as an intermediary between Muir and Professor Louis Agassiz who was making a brief sojourn in San Francisco, and was then regarded as the leading authority on glaciation. "I sent to Agassiz," she writes, "the [letter] you enclosed. Either that or something from the papers (New York "Tribune" clippings) excited him to say with great warmth, 'Muir is studying to greater purpose and with greater results than any one else has done.' LeConte told me he spoke of your work with enthusiasm."

Among these new friends was also the noted

botanist John Torrey, who, writing in September, 1872, from the home of his friend Dr. Engelmann in St. Louis, expressed his great satisfaction over the pleasant and instructive hours he spent with Muir in Yosemite, and gave an interesting account of his visit with Dr. Parry at Empire. It was, as Muir noted on the envelope of Torrey's letter, "his last Yosemite trip," for he died the following March. "That little Botrychium," adds Torrey in reference to a plant Muir had sent him, "looks peculiar and I will report on it when I go home." He never did, and twenty-six years elapsed before any one else found a plant of this genus in the High Sierra.

From the month of October of this same year, 1872, dates the beginning of Muir's devoted friendship with the artist William Keith, who, with a fellow artist by the name of Irwin, came to Yosemite with a letter of introduction from Mrs. Carr. "I commission Mr. Irwin," writes the latter, "to sketch you in your hay-rope suspenders, etc., against the day when you are famous and carry all the letters of the alphabet as a tail to your literary kites. . . . The Agassizes God bless them, go to-day, taking some of your glacierest letters, and the slip from the New York 'Tribune' containing 'A Glacier's Death,' for reading on the way."

And so these letters were lost to the purposes of this biography. But the following one, in which he gives the first full account of his discovery of living glaciers in the Sierra Nevada, has fortunately survived the accidents of time.

To Mrs. Ezra S. Carr

YOSEMITE VALLEY, *October 8th*, 1872

DEAR MRS. CARR:

Here we are again, and here is your letter of September 24th. I got down last eve, and boo! was I not weary? Besides pushing through the rough upper half of the great Tuolumne Cañon, have climbed more than twenty-four thousand feet in these ten days! — three times to the top of the glacieret of Mount Hoff[man] and once to Mounts Lyell and McClure.

Have bagged a quantity of Tuolumne rocks sufficient to build a dozen Yosemites. Strips of cascades longer than ever, lacy or smooth, and white as pressed snow. A glacier basin with ten glassy lakes set all near together like eggs in a nest. Three El Capitans and a couple of Tissiacks. Cañons glorious with yellows and reds of mountain maple and aspen and honeysuckle and ash, and new music immeasurable from strange waters and winds, and glaciers, too, flowing and grinding, alive as any on earth. Shall I pull you out some?

Here is a clean white-skinned glacier from the back of McClure with glassy emerald flesh and singing crystal blood, all bright and pure as a sky, yet handling mud and stone like a navvy, building moraines like a plodding Irishman. Here is a cascade two hundred feet wide, half a mile long, glancing this way and that, filled with bounce and dance and joyous hurrah, yet earnest as a tempest, and singing like angels loose on a frolic from heaven. And here [are] more cascades and more — broad and flat like clouds, and fringed like flowing hair, and falls erect as pines, and lakes like glowing eyes. And here are visions, too, and dreams, and a splendid set of ghosts, too many for ink and narrow paper. . . .

Professor [Samuel] Kneeland, Secretary of the Massachusetts Institute of Technology, gathered some letters I sent to Runkle and that "Tribune" letter and hashed them into a compost called a paper for the Boston Society of Natural History and gave me credit for all of the smaller sayings and doings, and stole the broadest truth to himself. I have the proof-sheets of the paper and will show them to you some time. . . .

As for the living "Glaciers of the Sierra," here is what I have learned concerning them. You will have the first chance to steal, for I

have just concluded my experiments on them for the season and have not yet cast them at any of the great professors or presidents.

One of the yellow days of last October, [1871], when I was among the mountains of the Merced group, following the footprints of the ancient glaciers that once flowed grandly from their ample fountains, reading what I could of their history as written in moraines and cañons and lakes and carved rocks, I came upon a small stream that was carrying mud of a kind I had not before seen. In a calm place where the stream widened I collected some of this mud and observed that it was entirely mineral in composition and fine as flour — like mud from a fine grit grindstone. Before I had time to reason I said, "Glacier mud! — mountain meal!"

Then I observed that this muddy stream issued from a bank of fresh-quarried stones and dirt that was sixty or seventy feet in height. This I at once took to be a moraine. In climbing to the top of it I was struck with the steepness of its slope and with its raw, unsettled, plantless, new-born appearance. The slightest touch started blocks of red and black slate, followed by a rattling train of smaller stones and sand and a cloud of the dry dust of mud, the whole moraine being as free from lichens

and weather-stains as if dug from the mountain that very day.

When I had scrambled to the top of the moraine I saw what seemed to be a huge snow-bank four or five hundred yards in length by half a mile in width. Embedded in its stained and furrowed surface were stones and dirt like that of which the moraine was built. Dirt-stained lines curved across the snow-bank from side to side, and when I observed that these curved lines coincided with the curved moraine, and that the stones and dirt were most abundant near the bottom of the bank, I shouted, "A living glacier!" These bent dirt lines show that the ice is flowing in its different parts with unequal velocity, and these embedded stones are journeying down to be built into the moraine, and they gradually become more abundant as they approach the moraine because there the motion is slower.

On traversing my new-found glacier I came to a crevasse down a wide and jagged portion of which I succeeded in making my way, and discovered that my so-called snow-bank was clear green ice, and comparing the form of the basin which it occupied with similar adjacent basins that were empty I was led to the opinion that this glacier was several hundred feet in depth.

Then I went to the "snow-banks" of Mounts Lyell and McClure and believed that they also were true glaciers and that a dozen other snow-banks seen from the summit of Mount Lyell, crouching in shadow, were glaciers living as any in the world and busily engaged in completing that vast work of mountain-making accomplished by their giant relatives now dead, which, united and continuous, covered all the range from summit to sea like a sky.

But, although I was myself thus fully satisfied concerning the real nature of these ice masses, I found that my friends[1] regarded my deductions and statements with distrust. Therefore I determined to collect proofs of the common measured arithmetical kind.

On the 21st of August last, I planted five stakes in the glacier of Mount McClure which is situated east of Yosemite Valley near the summit of the Range. Four of these stakes were extended across the glacier in a straight line, from the east side to a point near the middle of the glacier. The first stake was planted about twenty-five yards from the east

[1] An undated fragmentary letter of 1872, addressed to Mrs. Carr, contains the following passage: "I had a good letter from LeConte. He evidently doesn't know what to think of the huge lumps of ice that I sent him. I don't wonder at his cautious withholding of judgment. When my Mountain Mother first told me the tale I could hardly dare to believe either and kept saying, 'What?' like a child half asleep."

bank of the glacier, the second, ninety-four yards, the third, one hundred and fifty-two, and the fourth, two hundred and twenty-five yards. The positions of these stakes were determined by sighting across from bank to bank past a plumb-line made of a stone and a black horsehair.

On observing my stakes on the 6th of October, or in forty-six days after being planted, I found that stake No. 1 had been carried downstream eleven inches, No. 2, eighteen inches, No. 3, thirty-four, No. 4, forty-seven inches. As stake No. 4 was near the middle of the glacier, perhaps it was not far from the point of maximum velocity — forty-seven inches in forty-six days, or one inch per day. Stake No. 5 was planted about midway between the head of the glacier and stake No. 4. Its motion I found to be in forty-six days forty inches.

Thus these ice masses are seen to possess the true glacial motion. Their surfaces are striped with bent dirt bands. Their surfaces are bulged and undulated by inequalities in the bottom of their basins, causing an upward and downward swedging corresponding to the horizontal swedging as indicated by the curved dirt bands.

The Mount McClure glacier is about one half mile in length and about the same in width

at the broadest place. It is crevassed on the southeast corner. The crevasse runs about southeast and northeast and is several hundred yards in length. Its width is nowhere more than one foot.

The Mount Lyell glacier, separate from that of McClure by a narrow crest, is about a mile in width by a mile in length.

I have planted stakes in the glacier of Red Mountain also, but have not yet observed them.

The Sierras adjacent to the Yosemite Valley are composed of slabs of granite set on edge at right angles to the direction of the range, or about N. 30° E., S. 30° W. Also lines of cleavage cross these, running nearly parallel with the main range. Also the granite of this region has a horizontal cleavage or stratification. The first mentioned of these lines have the fullest development, and give direction and character to many valleys and cañons and determine the principal features of many rock forms. No matter how hard and domed and homogeneous the granite may be, it still possesses these lines of cleavage, which require only simple conditions of moisture, time, etc., for their development. But I am not ready to discuss the origin of these planes of cleavage which make this granite so denudable, nor their full significance with

regard to mountain structure in general. I will only say here that oftentimes the granite contained between two of these N. 30° E. planes is softer than that outside and has been denuded, leaving vertical walls as determined by the direction of the cleavage, thus giving rise to those narrow slotted cañons called "Devil's slides," "Devil's lanes," "Devil's gateways," etc.

In many places in the higher portions of the Sierra these slotted cañons are filled with "snow," which I thought might prove to be ice — might prove to be living glaciers still engaged in cutting into the mountains like endless saws.

To decide this question on the 23d of August last, I set two stakes in the narrow slot glacier of Mount Hoffman, marking their position by sighting across from wall to wall, as I did on the McClure glacier, but on visiting them a month afterwards I found that they had been melted out, and I was unable to decide anything with any considerable degree of accuracy.

On the 4th of October last I stretched a small trout-line across the glacier, fastening both ends in the solid banks, which at this place were only sixteen feet apart. I set a short inflexible stake in the ice so as just to touch the tightly drawn line, by which means I was enabled to measure the flow of the glacier with great exactness.

Examining this stake in twenty-four hours after setting it, I found that it had been carried down about three sixteenths of an inch. At the end of four days I again examined it, and found that the whole downward motion was thirteen sixteenths of an inch, showing that the flow of this glacieret was perfectly regular.

In accounting for these narrow lane cañons so common here, I had always referred them to ice action in connection with special conditions of cleavage, and I was gratified to find that their formation was still going on. This Hoffman glacieret is about one thousand feet long by fifteen to thirty feet wide, and perhaps about one hundred feet deep in deepest places.

Now, then, Mrs. Carr, I must hasten back to the mountains. I'll go to-morrow.

[JOHN MUIR]

This letter forms the kernel of an article, "Living Glaciers of California," which he published in the "Overland Monthly" of December, 1872. The following January it was reprinted in Silliman's "Journal of Science and Arts," and so was brought to the attention of a wide circle of scientific men. The blank stubbornness of the prejudices by which Muir was opposed at this time is revealed in the fact that ten years after Muir had published his dis-

covery, and the facts had been confirmed by Professor LeConte and accepted by leading geologists, Professor Whitney asserted in one of his papers, "It may be stated that there are no glaciers at all in the Sierra Nevada. . . . There are certainly none in the higher portions of the Sierra Nevada or Rocky Mountains, these most elevated regions having been sufficiently explored to ascertain that fact." When Israel C. Russell, of the United States Geological Survey, wrote his treatise on "Glaciers of North America," giving Muir full credit for his discovery, he called attention to this curiously dogmatic statement, and to the fact that Clarence King "also rejected Mr. Muir's observations as is shown by several emphatic passages in his report on the exploration of the fortieth parallel."

In the following letter, of which the first part is missing, Muir records some observations regarding the amount of erosion accomplished by water, as compared with ice, since the close of the last glacial epoch. Attention should be called also to Muir's observation that, viewed from mountain tops, the outlines of moraines about Yosemite are marked by fir forests.

To Mrs. Ezra S. Carr

Autumn, [1872]

. . . The bottom portion of the foregoing section, with perpendicular sides is here about two feet in depth and was cut by the water. The Nevada here *never was* more than four or five feet deep, and all of the bank records of all the upper streams say the same thing of the absence of great floods.

The entire region above Yosemite and as far down as the bottom of Yosemite has scarcely been touched by any other denudation than that of ice. Perhaps all of the post-glacial denudation of every kind would not average an inch in depth for the whole region.

Yosemite and Hetch Hetchy are lake basins filled with sand and the matter of moraines washed from the upper cañons. The Yosemite ice in escaping from the Yosemite basin was compelled to flow upward a considerable height on both sides of the bottom walls of the Valley. The cañon below the Valley is very crooked and very narrow, and the Yosemite glacier flowed across all of its crooks and high above its walls without paying any compliance to it, thus: [drawing]. The light lines show the direction of the ice current.[1]

[1] The text of this letter is taken from a typewritten copy of the original which has been lost. Hence it is not pos-

In going up any of the principal Yosemite streams, lakes in all stages of decay are found in great abundance regularly becoming younger until we reach the almost countless gems of the summits with scarce an inch of carex upon their shallow sandy borders, and with their bottoms still bright with the polish of ice. Upon the Nevada and its branches there are not fewer than a hundred of these glacial lakes from a mile to a hundred yards in diameter, with countless glistening pondlets not much larger than moons.

All of the grand fir forests about the Valley are planted upon moraines and from any of the mountain tops the shape and extent of the neighboring moraines may always be surely determined by the firs growing upon them.

Some pines will grow upon shallow sand and crumbling granite, but those luxuriant forests of the silver firs are always upon a generous bed of glacial drift. I discovered a moraine with smooth pebbles upon a shoulder of the South Dome, and upon every part of the Yosemite upper and lower walls.

I am surprised to find that *water* has had so little to do with mountain structure here. Whit-

sible to reproduce the drawing which was a part of the original letter.

ney says that there is no proof that glaciers ever flowed in this Valley, yet its walls have not been eroded to the depth of an inch since the ice left it, and glacial action is glaringly apparent many miles below the Valley. [JOHN MUIR]

In concluding this chapter a few comments are in place on the historical significance of the foregoing series of letters and published communications from the pen of John Muir. One writer, mistaking the facts, has claimed for Clarence King the honor of having been "the first to point out the prominent rôle which the ice of the glacial epochs must have played in the elaboration of the Yosemite Valley." For two decisive reasons this claim is void. In the first place, King believed that the ice gave nothing to the Valley but a little polishing, and in the next place he did not himself publish anything upon the subject until after William Phipps Blake and John Muir were already in print with their observations. Nor am I able to find that King, when he did publish, added any important scientific item to what Muir had already said more fully in his "Tribune" article. Since Blake, as previously noted, attributed the erosion of Yosemite to water pouring down from glaciers above the Valley, and not to the abrasion of glaciers themselves, Muir stands out

alone as the first one who demonstrated the part that ice played in the making of Yosemite. He, too, was the first one to point out how the glacial action was controlled by the peculiar structure and jointing of the granite. Others who have written upon this feature have in good part only followed in his footsteps.

It would have been interesting if Clarence King and John Muir could have been brought together for a discussion of their theories and observations. But so far as we are able to ascertain they never met personally. From Whitney's report on "The Geology of the Sierra Nevada," Muir knew that King had noted the existence of moraines in Yosemite Valley. But Whitney, in recording the fact, treated King's observations somewhat cavalierly, and four years later stigmatized them as erroneous. Thereafter the decidedly adverse views of his chief probably prevented King from leaving the question of glacial action and the origin of Yosemite open for further investigation. At any rate, six years later King, in his article entitled "The Range," expressly exempts Yosemite from formation by streams and ice, and classifies it as one of those "most impressive passages of the Sierra Valleys that are actual ruptures of the rock; either the engulfment of masses of great size, as Professor Whitney supposes in ex-

planation of the peculiar form of Yosemite, or a splitting asunder in yawning cracks!" The latter was apparently King's own view.

Muir regarded his "Tribune" article in 1871 as only a preliminary statement of his views, continuing meanwhile his study and exploration of the Sierra Nevada, with Yosemite as his base, until 1874. In that year he published, in the "Overland Monthly," his series of articles under the general title of "Studies in the Sierra." [1] These articles were a remarkable achievement for the time when they were written and contain the condensed results of five years of careful and detailed field-work. From 1869 to 1874 he had spent the whole of every summer season in the High Sierra, reading, as he put it, "the glacial manuscripts of God." Thereafter these studies were continued intermittently for another five years, so that in 1879 he could say that he had devoted ten years of

[1] The following are the titles of the individual "Studies": I, "Mountain Sculpture," May, 1874; II, "Origin of Yosemite Valleys," June, 1874; III, "Ancient Glaciers and their Pathways," July, 1874; IV, "Glacial Denudation," August, 1874; V, "Post-Glacial Denudation," November, 1874; VI, "Formation of Soils," December, 1874; VII, "Mountain-Building," January, 1875. The series has been reprinted with the inclusion of Muir's typographical corrections, in the *Sierra Club Bulletin*, vols. IX–XI (1915–21). For a convenient summary of Muir's views on the glaciation and origin of Yosemite the reader is referred to his book, *The Yosemite* (1912), Chapter XI.

his life to the interpretation of the Sierra Nevada. Numerous notebooks and sketches attest his industry as well as the minuteness and care with which he went over every part of the region.

When the Sierra Club began to republish Muir's "Studies in the Sierra," the noted geologist E. C. Andrews, of the Geological Survey of Australia, wrote to Secretary William E. Colby:

> John Muir's note on glacial action is very fine indeed. In Muir you had a man in America long ago who explained the action of ice-rivers, and it was really quite unnecessary to have waited until Henry Gannett made his great rediscovery or, rather, belated contribution to glacial studies. John Muir evidently was not understood in his generation, but he will surely come to his own now, and he will become one of the "Immortals" — one who illustrated the force of the passages, "Blessed are the meek, for they shall inherit the earth," and "Blessed are the pure in heart, for they shall see God.". . . Had I had access to the treasure house of knowledge afforded by the Sierra Club's reprint of Muir's notes, I would have written a much better note on "An Excursion to the Yosemite" in 1910, as I would have had a much larger number of valuable facts to draw upon than I had as a result of my limited observations alone.

It is interesting to compare this retrospective tribute with a forward-looking one in a paper

read before the Rhode Island Historical Society, in 1872. The writer, John Erastus Lester, met Muir in Yosemite and refers to him as one, "who, Hugh Miller like, is studying the rocks in and around the Valley. . . . He is by himself pursuing a course of geological studies, and is making careful drawings of different parts of the gorge. No doubt he is more thoroughly acquainted with this Valley than any one else. He has been far up the Sierras where glaciers are now in action, ploughing deep depressions in the mountains. He has made a critical examination of the superincumbent rocks, and already has much material upon which to form a correct theory."

Muir did not take up the question as to what the physical contours of the Yosemite region were before the last glacial epoch. In assuming that they were comparatively simple, many competent to form a judgment think he is more likely to have been right than those who speculate about a pre-glacial Yosemite. As for the doctrine of two distinct glaciations of the Sierra Nevada, recently advanced, most students of the question probably will agree with Professor Lawson that this is a theory that "must be subjected to much more critical study before it can be accepted by geologists as an established fact." In evaluating Muir's work it must be

borne in mind that he was contending against a theory which eliminated glaciers altogether from the causes that led to the formation of Yosemite. To have injected into his disproof of that theory speculations about a pre-glacial Yosemite would only have weakened, in his days, the penetrative power of his argument.

Now that time has mellowed the issues that once were so hotly debated, and death has removed the actors in the explorers' drama to that bourn whence no traveler returns, we may attempt the task of calmly assessing the originality and importance of the work which these early investigators have severally done. This is not the place to go into details, although we have looked into the work of each of these men with care. But even in the light of the facts presented it will, I think, be conceded without question that Muir was not only the first, but the only one who has presented a reasoned and systematic account of the glaciation of the Sierra Nevada, and who recognized the fact that the origin of Yosemite Valley cannot be separated from the origin of similar Yosemites in the Sierra Nevada. Indeed, the very use of the word "yosemite" in the generic sense was originated by him, and as such contains the essence of his denial of Whitney's and King's assumption that the Valley was of

unique cataclysmic origin. In his main contention he was right, and the extent to which his minor conclusions may be modified by advancing geological science is a question quite apart from the credit that belongs to him as the greatest of the pioneer students of the Yosemite problem.

To one who now looks back upon Muir's glacial explorations through his letters, the practical profit of these years of intense preoccupation and activity may seem disproportionately small. But it is all a matter of time and scale and the kind of values for which one is looking. As Sir E. Ray Lankester says in his "Diversions of a Naturalist," a man's pursuit of science has been sufficiently profitable if "it has given him a new and unassailable outlook on all things both great and small. Science commends itself to us as does Honesty and as does great Art and all fine thought and deed — not as a policy yielding material profits, but because it satisfies man's soul."

Muir's letters show that these deeper satisfactions of the soul were his in full measure during these years. There were those among his friends who again and again in their letters expressed their longing for his peace of mind. "I can see you sitting, reading this," wrote Thérèse Yelverton in 1872, "in some quiet spot in the

evening, with all nature as calm and still as your own heart. I used to envy you that, for mine will not be still, but is restless and unquiet." To all such longings he could but say in one form or another, "Camp out among the grass and gentians of glacier meadows, in craggy garden nooks full of Nature's darlings. Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop off like autumn leaves."

CHAPTER X

YOSEMITE AND BEYOND

1872–1873

PERHAPS it is natural that so picturesque a personality as John Muir should become a magnet for legends. Several are already afloat in the Valley he loved, and two of them are particularly baseless and absurd. The first is a canard about a sawmill by means of which he is said to have denuded the Valley of trees. It was a tale set afoot during the Hetch Hetchy controversy when his opponents were only too anxious to discredit him in the eyes of the public. The fact that Muir sawed only fallen timber has already been set forth in another connection and requires no further statement. The second concerns the place of his former habitation in the Valley. It owes its origin, no doubt, to the desire of local guides to gratify the curiosity of visitors who wish to see some particular spot that has associations with John Muir.

In a secluded, umbrageous tangle of alders and azaleas, on the spit of land formed by the confluence of Tenaya Creek with the Merced, stands what at first glance looks like the rem-

nants of a log cabin. Examination reveals the fact that there never had been a floor or windows; that it was never more than partly roofed and too low for a man to stand comfortably erect, while the opening which should serve as a door is only three feet high. It is all that remains of the sheep corral of John Lamon, the earliest inhabitant of the Valley. The myth-making faculty of the local guide has glorified it as "Muir's Lost Cabin," and as such it has been pointed out to great numbers of eager sight-seers.

But there is no mystery about the two cabins which Muir erected for himself in Yosemite. The places where they stood are known, although not a vestige of the original structures remains. The first he erected late in 1869 near the lower Yosemite Falls, and the site is now indicated by a bronze plate on a glacial boulder. He left it in the autumn of 1871 to take up his abode at Black's Hotel under the shadow of Sentinel Rock. But during the spring and summer of 1872 he erected for himself a log cabin in a clump of dogwood bushes, near the Royal Arches, on the banks of the Merced. The precise locality is to be sought at the point where the Merced approaches closest to the Royal Arches, and in a bold curve swings southward again across the Valley. In the same neighbor-

hood Lamon had also built his winter cabin. During the cold season of the year, when the south side of the Valley is wrapped in the frosty shadows of its high walls, the sun shines obliquely against the talus slopes of the north side and generates a grateful warmth. Here, then, was Muir's second home in Yosemite Valley — one, however, that he seems to have occupied very little after 1874. The survival of Lamon's old corral in the immediate neighborhood appears to have led to its identification with this last of Muir's cabins. The following winter letters of 1872 probably were written from there. Asa Gray's visit doubtless had given new stimulus to his study of the Yosemite flora, though in the absence of descriptive botanical handbooks he had great difficulty in determining the species.

To J. B. McChesney

YOSEMITE, *December 10th*, 1872

DEAR MCCHESNEY:

Yours of November 30th is here. Many thanks for the plants, though I am not much wiser. I knew the generic names of the first three. Only two are fully named. I suppose that the specimens I sent were too small and fragmentary to be determined with certainty. If I could only have access to books containing these plants I

could easily name them. I have read Tyndall's "Hours of Exercise," etc. Tyndall is a true man, with eyes that can see far down into the fountain truths of nature.

I am glad to know that you miss no opportunity in seeking Nature's altars. May she be good to you and feed your soul while you labor amid those Oakland wastes of civilization. I love [the] ocean as I do the mountains — indeed the mountains are an ocean with harder waves than yours.

You must be very happy in communion with so many kindred minds. I hope to know [Charles Warren] Stoddard some day. Tell him that I am going to build a nest and that it will always be open to him. Come next year, all of you. Come to these purest of terrestrial fountains. Come and receive baptism and absolution from civilized sins. You were but sprinkled last year. Come and be immersed! You have never seen our Valley with her jewels on, never seen her flowers of snow.

A few days ago many a flower ripened in the fields of air and they have fallen to us. All the trees and the bushes are flowered beyond summer, bowed down in snow bloom and all the rocks are buried. The day after the "storm" (a most damnable name for the flowering of the clouds) I lay out on the meadow to eat a grand

meal of new-made beauty, and about midday I suddenly wanted the outside mountains, and so cast off my coat and ran up towards Glacier Point. I soon was near [the] top, and was very hungry for the view that was so grandly mingled and covered with snow and sky, but the snow was now more than ten feet deep and dusty and light as winter fog. I tried to wallow and swim it, but the slope was so steep that I always fell back and sank out of sight, and I was fully baffled. I had a glorious slide downwards. Hawthorne speaks of the spirituality of locomotive railroad travel, but this *balmy* slide in the mealy snow out-spiritualized all other motions that I ever made in space.

Farewell, write again. I am lonely.

[John Muir]

During the interval between this and the next letter he made a rapid trip to Oakland in order to forward some literary plans in consultation with Mrs. Carr and others. On this occasion he met Edward Rowland Sill. In returning to Yosemite he walked from Turlock via Hopeton and Coulterville. The excursion to Cloud's Rest described in his letter to Gray came as the conclusion of this return walk which included a very adventurous first climb through the Tenaya Cañon, and which forms

the subject of a long letter to Mrs. Carr, published under the title of "A Geologist's Winter Walk." This very characteristic letter, in which he relates how he punished his "ill-behaved bones" for allowing themselves to be demoralized by even a brief sojourn in "civilization," will be found in its completest form in "Steep Trails." In spite of what Muir characterized as the "angular factiness of his pursuits," Dr. Gray was found to have carefully preserved the following and other Muir letters at the Gray Herbarium in Cambridge.

To Asa Gray

YOSEMITE VALLEY, *December* 18, 1872

MY DEAR GRAY:

I received the last of your notes two days ago, announcing the arrival of the ferns. You speak of three boxes of Primula. I sent seven or eight.

I had some measurements to make about the throat of the South Dome, so yesterday I climbed there, and then ran up to Clouds' Rest for your Primulas, and as I stuffed them in big sods into a sack, I said, "Now I wonder what mouthfuls this size will accomplish for the Doctor's primrose hunger." Before filling your sack I witnessed one of the most glorious of our mountain sunsets; not one of the assembled mountains seemed remote — all had ceased

their labor of beauty and gathered around their parent sun to receive the evening blessing, and waiting angels could not be more solemnly hushed. The sun himself seemed to have reached a higher life as if he had died and only his soul were glowing with rayless, bodiless *Light*, and as Christ to his disciples, so this departing sun soul said to every precious beast, to every pine and weed, to every stream and mountain, "My peace I give unto you."

I ran home in the moonlight with your sack of roses slung on my shoulder by a buckskin string — down through the junipers, down through the firs, now in black shadow, now in white light, past great South Dome white as the moon, past spirit-like Nevada, past Pywiack, through the groves of Illilouette and spiry pines of the open valley, star crystals sparkling above, frost crystals beneath, and rays of spirit beaming everywhere.

I reached home a trifle weary, but could have wished so Godful a walk some miles and hours longer, and as I slid your roses off my shoulder I said, "This is one of the big round ripe days that so fatten our lives — so much of sun on one side, so much of moon on the other."

I have a rare chance of getting your plants packed out of the Valley to-morrow, and so have determined to send all together with a few

seeds in a box by Wells Fargo Express. The books, both Hutchings' and mine, are along all right. Many thanks. I am hard at work on dead glaciers.

I am very cordially

Your friend

JOHN MUIR

To J. B. McChesney

YOSEMITE VALLEY, *December 20th*, 1872

MY DEAR MCCHESNEY:

Among all the souls which shine upon my eye up from that dim and distant Oakland none is of purer ray than your own, and living or dying, in this land or in that, I shall never cease to thank God for friends like you.

My excursion down into that befogged jungle of human plants in which you manage to live and love forms a far more notable chapter in my personal history than any of you can comprehend, and now that I am warm again, safe nestled in mountain ether, I seem to have returned to life from a strange and half-remembered death.

Here many a thought comes crowding to my page, but I must hush them back, for they would overcrowd a thousand letters. So drawing a long sigh I must content myself with saying 'thank you' for all your kindness, and leave

you to eat the good brown bread of your little hills, and whatsoever of God you can find there, until your angel shall again guide you to the clean fountains of the Sierras.

Remember me to all your family and to Kelsey and any of my friends you chance to see — Miss Brigham, Sill, and all the rest. Kiss your Alice some extra times for me. She is the sweetest flake of childhood I found in all your town, and she comes back to me in form and voice and in touch too, with most living vividness.

Farewell. I am

Ever your friend

JOHN MUIR

One of the gifts that came to his cabin at Christmas time was a beautiful lamp from a friend in Chicago, to whom he addressed the following letter in acknowledgment:

To Mrs. Kate N. Doggett

YOSEMITE VALLEY, *December 30th*, 1872

[Salutation torn off.]

I have just this minute for the first time lighted your elegant lamp, and I send you again most cordial thanks for so precious a gift.

This is the first St. Germain lamp I have seen, and it is certainly the most beautiful of all light fountains. Its forms have been composed by a

true artist. Its many curves blend into song with scarce a discordant tone. The trill around the base of the chimney is all that my eye-ear dislikes.

The massive finely moulded foundation glows like an ice-polished dome, and the grateful green of the shade is like that of high glacier lakes. If among the multitude of articles that now enter a human home there be one that deserves to be crowned with beauty above everything else, it is the fountain of light. The poet is the only workman capable of making a candlestick.

It is delightful to observe how steadily God-born beauty is flowing into all the handiwork of man. Nature is insinuating herself into every pore of humanity, and it is oozing out in forms that are constantly becoming less and less impure, and those forms of purer and more direct Godfulness are coming not only from the study cells of the painter and architect and art poets in general recognized as such, but they are flowing from the workshop — from the foundry and the forge.

I know little of men, seeing them only afar off and in the lump, but standing as I now do on the mountain-side and contemplating the various hives of industry among civilizations old and new, all looming on my vision, dim in the

great sea-divided distances, I have this one big, well-defined faith for humanity as a workman, that the time is coming when every "article of manufacture" will be as purely a work of God as are these mountains and pine trees and bonnie loving flowers.

I only meant to say you another warm thank-you, but the fresh dewy beauty of your sunrise lamp conjured and loosened these thoughts and sent them down to my page, as rain and frost loosen and send down trains of rattling rough-angled rocks to Yosemite meadows.

I suppose our dear Mrs. Carr has told you of the eclipse of my life, years ago when my eyes were quenched just at the spring-dawn of summer when the voice of the bluebird began to appear mingled with the first flower-words of Erigenia and Anemone. But though in that terrible darkness I died to light, I lived again, and God who is Light has led me tenderly from light to light to the shoreless ocean of rayless beamless Spirit Light that bathes these holy mountains.

[John Muir]

The earlier writings of John Ruskin were at this time widely read and discussed both in England and in America, and Muir, also, was a deeply interested reader. But he took exception

to the unqualified admiration with which some of his friends accepted Ruskinian ideas. In the following letter we have a brief but searching critique, from his point of view, of the dualism and artificiality of Ruskin's nature philosophy.

To J. B. McChesney

YOSEMITE VALLEY, *January 10th*, 1873

DEAR MCCHESNEY:

I have just finished a ramble through the handsome gardens of Ruskin that you gave me. Page after page is studded with flowers like a glacier meadow, and most of his chapters of hill and dale make a handsome landscape in spite of his numberless boundaries and human-carved rocks.

Few of our modern writers are so strikingly suggestive as Ruskin. His pungent steel-tempered sentences compel one to think, and his errors and absurdities are so clearly expressed that they do good rather than harm.

Ruskin is great, but not a great man — only a great ready-to-burst bud of a man. He is chained and tethered, not like the stars, by Nature's own laws, but by ropes and chains manufactured in the mills and forges of conventions, and although they are made of good material and are so transparent in places as to be well-nigh invisible, and he roams as if loose

over this world and what he takes to be the next, yet after all one never can feel that he is free. His widest world, his highest sky, is enclosed by a hard definite shell making one think of a mouse beneath a huge bell-glass, so huge that it does not feel its bounds. The bell-glass underneath which Ruskin lives and moves and brandishes his verbal spears is made of the heaviest and most opaque *stuff* in the universe — a thousand times denser than hammered steel.

There are writers of far lesser intellectual development who yet give hints and hopes of indefinite growth — it doth not appear what they *shall* be, but Ruskin leaves us nothing to hope. Among all the possibilities of after-development I can find nothing that will fit him. His very hopes and longings of heaven that he places deep in the immensities and eternities are weighed and measured and branded and they are bounded by surfaces definite as those of a crystal and could be made to order like bricks by Yankee machinery.

But the worst thing I find in his books is his lack of faith in the Scriptures of Nature. Nature, according to Ruskin, is the joint work of God and the devil, and therefore made up of alternate strips and bars of evil and good.

We must not dwell in contact with Nature,

he tells us, else we will become blind to her beauty, which is the vulgar gross old heresy that familiarity with God will produce contempt of him. He would have us take beauty as we do roast beef or medicine, at stated times, the intervals to be measured by a London watch instead of inhaling it every moment as we do breath.

Evil, he says, always exists with good and ugliness with beauty, in order to act as foils the one for the other. Beside every mountain angel he sets a mountain devil, that the blackness of the one may be made wholly striking by the whiteness of the other, and that the angel's white may be brightened by the devil's black. Here I want to say so much that I cannot say anything.

Ruskin, with all his well-bred amiability, is an infidel to Nature. You never can feel that there is the slightest *union* betwixt Nature and him. He goes to the Alps and improves and superintends and reports on Nature with the conceit and lofty importance of a factor of a duke's estate.

Kalmia, one of the very dearest of our mountain flowers, a companion of Bryanthus and Cassiope, one of the purest and most outspoken words of love that God has ever uttered on mountain meadow, he calls a type of deceit be-

cause when he eats it, it poisons him — is unfit for his stomach — a good English reason for setting it on the devil's half of Nature. But I have lived with and loved Kalmia many a day, and slept with my cheek upon her bonnie purple flowers, and I know that she is not a devil's foil for any plant. She was born and bred in Love Divine and dwells in Love and speaks Love only.

And I know something about "the blasted trunk, and the barren rock, the moaning of the bleak winds, the solemn solitudes of moors and seas, the roar of the black, perilous, merciless whirlpools of the mountain streams;" and they have a language for me, but they declare nothing of wrath or of hell, only Love plain as was ever spoken.

Christianity and mountainanity are streams from the same fountain, and when I read the bogies of Ruskin's "mountain gloom," and mountain evil, and mountain devil, and the unwholesomeness of mountain beauty as every-day breath and bread, then I wish for plenty of words and a preacher's commission.

Farewell. My kindest regards to your parents and wife and younglings. I am

Ever truly thine

JOHN MUIR

To Asa Gray

YOSEMITE VALLEY, *February* 22, 1873

DEAR DR. GRAY:

Your letter of January 4 arrived just before our trails were snow-blocked. The seeds I sent in a letter envelope are *Libocedrus decurrens.*

As for the express charges on the primula box, I have not got the receipt by me and cannot tell what they amount to, but you must remember that you gave me money sufficient to prepay all such boxes for a year to come.

Did I tell you that our wee primula grows upon the Hoffman range a few miles west of Mount Hoffman, and also on the east slope of the Sierra, between Mounts Lyell and Ritter? Next summer I will find a new genus and a half dozen new species for that generous embalming which you propose. Here are a few plants which I wish you would name for me.

Our winter is very glorious. January was a block of solid sun-gold, not of the thin frosty kind, but of a quality that called forth butterflies and tingled the fern coils and filled the noontide with a dreamy hum of insect wings. On the 15th of January I found one big *Phacelia* in full bloom on the north side of the Valley about one thousand feet above the bottom or five thousand above the sea. Also at the same

sunny nook several bushes of *Arctostaphylos glauca* were in full flower, and many other plants were swelling their buds and breathing fragrance, showing that they were full of the thoughts and intentions of spring. Our Laurel was in flower a month ago; so was our winter wheat (*Libocedrus*).

This month up to present date has been profusely filled with snow. About ten feet has fallen on the bottom of the Valley since the 30th of January. Your primulas on Clouds' Rest must be covered to a depth of at least twelve or fifteen feet. I wish you could see our pines in full bloom of soft snow, or waving in storm. They know little of the character of a pine tree who see it only when swaying drowsily in a summer breeze or when balanced motionless and fast asleep in hushed sunshine.

We are grandly snowbound and have all this winter glory of sunlight and storm-shade to ourselves. Our outside doors are locked, and who will disturb us?

I call your attention to the two large yellow and purple plants from the top of Mount Lyell, above all of the pinched and blinking dwarfs that almost justify Darwin's mean ungodly word "struggle." They form a rounded expansion upon the wedge of plant life that slants up into the thin lean sky. They are the noblest

plant mountaineers I ever saw, climbing above the glaciers into the frosty azure, and flowering in purple and gold, rich and abundant as ever responded to the thick, creamy sun-gold of the tropics. Ever very cordially yours

JOHN MUIR

In his reply to this letter, which reflects Muir's watchful interest in the sun-warmed winter cliff gardens above his cabin, Gray reported on the plants Muir had sent for identification. "If you will keep botanizing in the High Sierra," he wrote, "you will find curious and new things, no doubt. One such, at least, is in your present collection in letter — the wee mouse-tail *Ivesia*. And the rare species of Lewisia is as good as new, and is so wholly to California. . . . *Ivesia Muirii* is the first fruit — 'the day of small things.' Get a new alpine genus, that I may make a *Muiria glacialis!*" The primula so often referred to is the beautiful alpine red-purple Sierra Primrose (*Primula suffrutescens* Gray).

To Mrs. Ezra S. Carr

YOSEMITE VALLEY, *March 30th*, [1873.]

DEAR MRS. CARR:

Your two last are received. The package of letters was picked up by a man in the Valley.

There was none for thee. I have Hetch Hetchy about ready. I did not intend that Tenaya ramble ["A Geologist's Winter Walk"] for publication, but you know what is better.

I mean to write and send all kinds of game to you with hides and feathers on, for if I wait until all become one it may be too long. As for LeConte's "Glaciers," they will not hurt mine, but hereafter I will say my thoughts to the public in any kind of words I chance to command, for I am sure they will be better expressed in this way than in any second-hand hash, however able.

Oftentimes when I am free in the wilds I discover some rare beauty in lake or cataract or mountain form, and instantly seek to sketch it with my pencil, but the drawing is always enormously unlike the reality. So also in word sketches of the same beauties that are so living, so loving, so filled with warm God, there is the same infinite shortcoming. The few hard words make but a skeleton, fleshless, heartless, and when you read, the dead bony words rattle in one's teeth. Yet I will not the less endeavor to do my poor best, believing that even these dead bone-heaps called articles will occasionally contain hints to some living souls who know how to find them. I have not received Dr. Stebbins' letter. Give him and all my friends

love from me. I sent Harry Edwards the butterflies I had lost. Did he get them?

Farewell, dear, dear spiritual mother. Heaven repay your everlasting love.

JOHN MUIR

To Mrs. Ezra S. Carr

[YOSEMITE], *April 1st*, 1873

DEAR MRS. CARR:

Yours containing Dr. Stebbins' was received to-day. Some of our letters come in by Mariposa, some by Coulterville, and some by Oak Flat, causing large delays.

I expect to be able to send this out next Sunday, and with it "Hetch Hetchy," which is about ready, and from this time you will receive about one article a month.

This letter of yours is a very delightful one. I shall look eagerly for the "Rural Homes."

When I know Dr. Stebbins' summer address I will write to him. He is a dear young soul, though an old man. I am "not to write" — therefore, farewell, with love.

I will some time send you
Big Tuolumne Cañon
Ascent of Mount Ritter
Formation of Yosemite Valley
Other Yosemite Valleys (1, 2, 3, 4, or more)
The Lake District

Formation of Lakes
Transformation of Lakes to Meadows, Wet
The Glacial Period
Formation of Simple Cañons to Meadows, Dry
Formation of Compound Cañons to Sandy Flats, Treeless, or to Sandy Flats, Forested
Description of Each Glacier of Region
Origin of Sierra Forests
Distribution of Forests
A Description of each of the Yosemite Falls, and of the Basins from whence derived
Yosemite Shadows, as Related to Groves, Meadows and Bends of the River
Avalanches, Earthquakes, Birds, Bears, etc. and "mony mae."

[JOHN MUIR]

To Sarah Muir Galloway

YOSEMITE VALLEY, *September 3rd*, 1873

DEAR SISTER SARAH:

I have just returned from the longest and hardest trip I have ever made in the mountains, having been gone over five weeks. I am weary, but resting fast; sleepy, but sleeping deep and fast; hungry, but eating much. For two weeks I explored the glaciers of the summits east of here, sleeping among the snowy mountains without blankets and with but little to eat on

account of its being so inaccessible. After my icy experiences it seems strange to be down here in so warm and flowery a climate.

I will soon be off again, determined to use all the season in prosecuting my researches — will go next to Kings River a hundred miles south, then to Lake Tahoe and adjacent mountains, and in winter work in Oakland with my pen.

The Scotch are slow, but some day I will have the results of my mountain studies in a form in which you all will be able to read and judge of them. In the mean time I write occasionally for the "Overland Monthly," but neither these magazine articles nor my first book will form any finished part of the scientific contribution that I hope to make. . . . The mountains are calling and I must go, and I will work on while I can, studying incessantly.

My love to you all, David and the children and Mrs. Galloway who though shut out from sunshine yet dwells in Light. I will write again when I return from Kings River Cañon. The leaf sent me from China is for Cecelia.

Farewell, with love everlasting

[JOHN MUIR]

The exploratory excursion into the Kings River region, which he had in prospect when he wrote to his sister, forms the subject of several

of the following letters. As both the letters and his notebooks show, the trip involved almost incredible physical exertion and endurance on his part. By delaying his start for a day, Muir succeeded in persuading Galen Clark to go along. Unfortunately the latter's duties as Guardian of Yosemite Valley compelled him to leave the party before its objects had been accomplished. In his volume, "The Yosemite," Muir has paid a warm tribute to Clark both as a man and a mountaineer. After the botanist Dr. A. Kellogg and the artist William Simms left him at Mono, Muir pushed on alone to Lake Tahoe.

To Mrs. Ezra S. Carr

CLARK'S STATION, *September 13th*, [1873.]

DEAR MRS. CARR:

We have just arrived from the Valley, and are now fairly off for the ice in the highest and broadest of the Sierras. Our party consists of the blessed Doctor [A. Kellogg] and Billy Simms, *Artist*, and I am so glad that the Doctor will have company when I am among the summits. We hoped to have secured Clark also, a companion for me among the peaks and snow, but alack, I *must* go alone. Well, I will not complain a word, for I shall be overpaid a thousand, thousand fold. I can give you no

measured idea of the time of our reaching Tahoe, but I will write always on coming to stations if such there be in the rocks or sage where letters are written. . . .

Now for God's glorious mountains. I will miss you, yet you will more than half go. It is only now that I feel that I am taking leave of you. *Farewell.* Love to all.

[John Muir]

To Mrs. Ezra S. Carr

Camp on South Fork, San Joaquin, near divide of San Joaquin and Kings River, *September 27th* [?] [1873.]

Dear Mrs. Carr:

We have been out nearly two weeks. Clark is going to leave us. Told me five minutes ago. Am a little nervous about it, but will of course push on alone.

We came out through the Mariposa Grove, around the head of the Chiquita Joaquin, across the cañon of the North Fork of San Joaquin, then across the cañon of Middle Fork of San Joaquin, and up the east side of the South Fork one day's journey. Then picked our wild way across the cañon of the South Fork and came up one day's journey on the west side of the cañon; there we made a camp for four days. I was anxious to see the head fountains of this

river, and started alone, Clark not feeling able to bear the fatigue involved in such a trip. I set out without blankets for a hard climb; followed the Joaquin to its *glaciers*, and climbed the highest mountain I could find at its head, which was either Mount Humphreys or the mountain next south. This is a noble mountain, considerably higher than any I have before ascended. The map of the Geological Survey gives no detail of this wild region.

I was gone from camp four days; discovered fifteen glaciers, and yosemite valleys "many O." The view from that glorious mountain (13,500 feet high?) is not to be attempted here. Saw over into Owens River valley and all across the fountains of Kings River. I got back to camp last evening. This morning after breakfast Clark said that he ought to be at home attending to business and could not feel justified in being away, and therefore had made up his mind to leave us, going home by way of the valley of the main Joaquin.

We will push over to the Kings River region and attempt to go down between the Middle and North Forks. Thence into the cañon of the South Fork and over the range to Owens Valley, and south to Mount Whitney if the weather holds steady, then for Tahoe, etc. As we are groping through unexplored regions our plans

may be considerably modified. I feel a little anxious about the lateness of the season. We may be at Tahoe in three or four weeks.

We had a rough time crossing the Middle Fork of the Joaquin. Browny rolled down over the rocks, not sidewise but end over end. One of the mules rolled boulder-like in a yet more irregular fashion. Billy went forth to sketch while I was among the glaciers, and got lost — was thirty-six hours without food.

I have named a grand *wide-winged* mountain on the head of the Joaquin Mount Emerson. Its head is high above its fellows and wings are white with ice and snow.

This is a dear bonnie morning, the sun rays lovingly to His precious mountain pines. The brown meadows are nightly frosted browner and the yellow aspens are losing their leaves. I wish I could write to you, but hard work near and far presses heavily and I cannot. Nature makes huge demands, yet pays an thousand, thousand fold. As in all the mountains I have seen about the head of Merced and Tuolumne this region is a song of God.

On my way home yesterday afternoon I gathered you these orange leaves from a grove of one of the San Joaquin yosemites. Little thought I that you would receive them so soon.

Remember me to the Doctor and the boys and to Mrs. and Mr. Moore and Keith. Dr. Kellogg wishes to be kindly remembered. Farewell. [JOHN MUIR]

To Mrs. Ezra S. Carr

Camp in dear Bonnie Grove where the pines meet the foothill oaks. About eight or ten miles southeast from the confluence of the North Fork of Kings River with the trunk.

October 2d [?] [1873.]

DEAR MRS. CARR:

After Clark's departure a week ago we climbed the divide between the South Fork of the San Joaquin and Kings Rivers. I scanned the vast landscape on which the ice had written wondrous things. After a short scientific feast I decided to attempt entering the valley of the west branch of the North Fork, which we did, following the bottom of the valley for about ten miles, then was compelled to ascend the west side of the cañon into the forest. About six miles farther down we made out to reënter the cañon where there is a yosemite valley, and by hard efforts succeeded in getting out on the opposite side and reaching the divide between the North Fork and the Middle Fork. We then followed the top of the divide nearly to the con-

fluence of the North Fork with the trunk, and crossed the main river yesterday, and are now in the pines again over all the wildest and most impracticable portions of our journey.

In descending the divide to the main Kings River we made a descent of near seven thousand feet, "down derry down" with a vengeance, to the hot pineless foothills. We rose again and it was a most grateful resurrection. Last night I watched the writing of the spiry pines on the sky gray with stars, and if you had been here I would have said, Look! etc.

Last evening when the Doctor and I were bed-building, discussing as usual the goodnesses and badnesses of boughy mountain beds, we were astonished by the appearance of two prospectors coming through the mountain rye. By them I send this note.

To-day we will reach some of the Sequoias near Thomas' Mill (*vide* Map of Geological Survey), and in two or three days more will be in the cañon of the South Fork of Kings River. If the weather appears tranquil when we reach the summit of the range I may set out among the glaciers for a few days, but if otherwise I shall push hastily for the Owens River plains, and thence up to Tahoe, etc.

I am working hard and shall not feel easy until I am on the other side beyond the reach

of early snowstorms. Not that I fear snowstorms for myself, but the poor animals would die or suffer.

The Doctor's duster and fly-net are safe, and therefore he is. Billy is in good spirits, apt to teach sketching in and out of season. Remember me to the Doctor and the boys and Moores and Keith, etc.

Ever yours truly
JOHN MUIR

To Mrs. Ezra S. Carr

INDEPENDENCE, *October 16th*, 1873

DEAR MRS. CARR:

All of my season's mountain work is done. I have just come down from Mount Whitney and the newly discovered mountain five miles northwest of Whitney, and now our journey is a simple saunter along the base of the range to Tahoe, where we will arrive about the end of the month, or a few days earlier.

I have seen a good deal more of the high mountain region about the heads of Kings and Kern Rivers than I expected to see in so short and so late a time. Two weeks ago I left the Doctor and Billy in the Kings River yosemite, and set out for Mount Tyndall and adjacent mountains and cañons. I ascended Tyndall and ran down into the Kern River cañon and

climbed some nameless mountains between Tyndall and Whitney, and thus gained a pretty good general idea of the region. After crossing the range by the Kearsage Pass, I again left the Doctor and Billy and pushed southward along the range and northward and up Cottonwood Creek to Mount Whitney; then over to the Kern Cañon again and up to the new "highest" peak which I did not ascend, as there was no one to attend to my horse.

Thus you see I have rambled this highest portion of the Sierra pretty thoroughly, though hastily. I spent a night without fire or food in a very icy wind-storm on one of the spires of the new highest peak, by some called Fisherman's Peak.[1] That I am already quite recovered from the tremendous exposure proves that I cannot be killed in any such manner. On the day previous I climbed two mountains, making over ten thousand feet of altitude. It seems that this new Fisherman's Peak is causing some stir in the newspapers. If I feel writeful I will send you a sketch of the region for the "Overland."

I saw no mountains in all this grand region that appeared at all inaccessible to a mountaineer. Give me a summer and a bunch of matches

[1] Now called Mount Whitney. An error in the first Geological Survey map, explained by Clarence King in the second edition of his *Mountaineering in the Sierra Nevada*, led to the identification of Sheep Mountain as Mount Whitney.

and a sack of meal and I will climb every mountain in the region.

I have passed through Lone Pine and noted the yosemite and local subsidences accomplished by the earthquakes. The bunchy bushy compositæ of Owen's Valley are glorious. I got back from Whitney this P.M. How I shall sleep! My life rose wave-like with those lofty granite waves. Now it may wearily float for a time along the smooth flowery plain.

Love to all my friends.

Ever cordially yours

JOHN MUIR

The "stir in the newspapers," alluded to by Muir, was partly at the expense of Clarence King who, in his published account of what he believed to have been the first ascent of Mount Whitney, had described it as a somewhat venturesome undertaking. It now became evident that he had missed Mount Whitney and climbed an easy neighboring mountain of less elevation. In 1903 Mr. George W. Stewart published in the "Mount Whitney Club Journal" a communication from Muir which is of considerable interest in this connection, not only because it presents the original records of first ascents of Mount Whitney, but also because in it Muir states it to have been his uni-

form practice never to leave his name on any mountain, rock, or tree. "Reading the accounts of these Whitney climbs [in the above-mentioned journal] recalls to mind," he writes, "my first ascent in October, 1873. Early in the morning of the 25th I left my horse on a meadow a short distance north of the Hockett trail crossing of the summit, and climbed the mountain (now Sheep Mountain), about fourteen thousand feet high, named Mount Whitney on the State Geological Survey map of the region. To the north about eight miles I saw a higher peak and set off to climb it the same day. I reached the summit needles about eleven o'clock that night, and danced most of the time until morning, as the night was bitterly cold and I was in my shirt-sleeves. The stars and the dawn and the sunrise were glorious, but, having had no supper, I was hungry and hastened back to camp, and to Independence, where I left my horse, and set out again for the summit afoot, direct from the east side, going up a cañon opposite Lone Pine. I reached the summit about eight o'clock A.M., October 29, 1873. In a yeast-powder can I found the following account of first ascents, which I copied into my notebook as follows:

Sept. 19, 1873. This peak, Mt. Whitney, was this day climbed by Clarence King, U.S. Geologist, and

Frank F. Knowles, of Tule River. On Sept. 1st, in New York, I first learned that the high peak south of here, which I climbed in 1871, was not Mt. Whitney, and I immediately came here. Clouds and storms prevented me from recognizing this in 1871, or I should have come here then.

All honor to those who came here before me.

C. KING

Notice. Gentlemen, the looky finder of this half a dollar is wellkome to it. CARL RABE
Sep. 6th, 1873

"Of course, I replaced these records, as well as Carl Rabe's half a dollar, but did not add my own name. I have never left my name on any mountain, rock, or tree in any wilderness I have explored or passed through, though I have spent ten years in the Sierra alone."

In this Kings-Kern-Tahoe excursion Muir had traveled over a thousand wilderness miles, climbed numerous peaks, and discovered many glaciers and new yosemites. His observations had furnished him with a harvest of new facts to be utilized in the projected series of "Studies in the Sierra" which he had agreed to write for the "Overland Monthly" during the coming winter. His articles on "Hetch Hetchy Valley," and "Explorations in the Great Tuolumne Cañon," had appeared in the same mag-

azine during July and August, lifting him at once to the rank of its foremost contributor. In the second of these articles he had disproved Whitney's statement that the Tuolumne Cañon was "probably inaccessible through its entire length," and that "it certainly cannot be entered from its head." "I have entered the Great Cañon from the north by three different side cañons," wrote Muir, "and have passed through it from end to end . . . without encountering any extraordinary difficulties. I am sure that it may be entered at more than fifty different points along the walls by mountaineers of ordinary nerve and skill. At the head it is easily accessible on both sides."

But Muir, as the reader will have perceived, was a mountaineer of more than ordinary nerve and skill, and one secret of his amazing physical endurance was not in his muscles, but in the spirit which they served. Of this fact he was not wholly unaware when he wrote, "It is astonishing how high and far we can climb in mountains that we love." But he seems to have been conscious, also, of the development, in himself, of a kind of muscle sense referred to in a passage which he wrote during the exploring season of 1873:

> The life of a mountaineer is favorable to the development of soul-life as well as limb-life, each re-

ceiving abundance of exercise and abundance of food. We little suspect the great capacity that our flesh has for knowledge. Oftentimes in climbing cañon-walls I have come to polished slopes near the heads of precipices that seemed to be too steep to be ventured upon. After scrutinizing them, and carefully noting every dint and scratch that might give hope of a foothold, I have decided that they were unsafe. Yet my limbs, possessing a separate sense, would be of a different opinion, after they also had examined the descent, and confidently have set out to cross the condemned slopes against the remonstrances of my other will. My legs sometimes transport me to camp in the darkness, over cliffs and through bogs and forests that are inaccessible to city legs during the day, even when piloted by the mind which owns them.

On the first of November Muir had reached Lake Tahoe and in two weeks he was in Yosemite again. The Yosemite chapter of his life was about to close and it cost him a severe struggle to separate himself from the beloved Valley. But he had engaged himself to bring to paper his mountain studies during the winter, a task that involved at least a temporary sojourn in a place within easy reach of San Francisco. "I suppose I must go into society this winter," he wrote to his sister Sarah on November 14, 1873. "I would rather go back in some undiscoverable corner beneath the rafters of an old garret with my notes and books and listen

to the winter rapping and blowing on the roof. May start for Oakland in a day or two. Will probably live in Professor Carr's family."

He departed as the first snowflakes began to whirl over the Valley which thereafter was to know him as a resident no more. When he reached Oakland the Carr household was in deep mourning over the tragic death of the eldest son, so he accepted the offer of a room in the home of his friends Mr. and Mrs. J. B. McChesney, at 1364 Franklin Street.

END OF VOLUME I

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